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The JOURNAL of the Iowa State Medical Society

Vol. XXIII JANUARY, 1933 No. 1

My first wish is to see the whole world in peace, and the inhabitants of it as one band of brothers, striving who should contribute most to the happiness of mankind.

—WASHINGTON.

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No Growth in DEXTRI-MALTOSE *After Exposure to Air*

FIG. 2. This can of Dextri-Maltose was opened for one-half hour to approximate conditions under which accidental contamination appeared in syrup at left. To make the test more severe, the Dextri-Maltose was also heavily inoculated with a micro-organism which had previously produced thick growth in syrup. The can was then closed and not opened for 40 days, at which time no growth was visible. Later, the can was opened 4 or 5 times for a total exposure of about 1 hour, without the slightest evidence of growth.

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The JOURNAL
of the
Iowa State Medical Society

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THE GREAT IMPORTANCE OF THE MEDICAL PROFESSION IN THE SCHEME OF NATIONAL DEFENSE*

GEO. A. SKINNER, M.D.
Col., M.C., U. S. Army
Surgeon, Seventh Corps Area
Omaha, Nebraska

When everything is peaceful and skies are sunny, the pacifists cry loud and long that the Army and Navy are useless, and that all disagreements among nations should be settled by arbitration. When everyone in the family is well, Christian Science has a mighty appeal, and the need for a physician is not felt. Let a real crisis arise in the nation, however, or a pain occur in the southeast corner of the abdomen, the cry is still loud and long, but oh, what a difference in the quality thereof! In the former case the appeal is to the Army and Navy and in the latter it is to the physician. The pacifist, the cultist, and other faddists are quickly forgotten when real trouble is at hand. While we of the Army may sometimes be discouraged over the apparent lack of appreciation of our contribution to the national life, emergencies have occurred in the past with such frequency that we do not entirely forget our value and ability to serve, and it is probable that national emergencies, as well as private ones, will continue to arise from time to time. Certain it is that with all the advance in medical and surgical knowledge, acute appendicitis continues to appear, and with the news from China still smoking hot, due to the great destruction of life and property in the conflict that was not officially a war, we may safely assume that there is always a reasonable probability of national crises still occurring. Under such circumstances, it is no more unreasonable to consider the ordinary, common sense measures of safety for our nation than it is for the individual citizen to take like heed. In spite of efficient fire departments, we still protect our property with fire insurance. Even though there have been great advances in preventive medicine, life insurance has not become obsolete. The consideration of reasonable means for the safety of our beloved country is never out of order, for it is upon the patriotism of its citizens that our country has ever placed, and must necessarily always place, its main reliance for protection. That this confidence has not been misplaced has been abundantly demonstrated in our history, but always the cost in lives and treasure has been appalling, and such losses could have been greatly reduced by proper plans and preparation. It is to this latter problem that our discussion will turn for a little time this evening, and I commend it to your thoughtful consideration.

While an army should always be prepared for active defense operations, it does not follow that it does nothing but fight. To perform a simple surgical operation, years are spent in training, and scarcely any of them in the operating room. The training of our troops covers a very wide field, and a trained force has many uses besides warfare.

Perhaps it would be wise to try to establish a clear picture of the work done by the Medical Department of the Army, both in times of peace and in war. Then we can see what a tremendously important part the medical profession of the country really has to perform, for the efficiency of the Army Medical Department depends entirely on the interest and the enthusiasm of the rank and file of medical men in all parts of our land.

The Medical Department consists of: (1) The Medical Corps, (2) The Dental Corps, (3) The Veterinary Corps, (4) The Medical Administrative Corps, (5) The Nurse Corps, (6) The Medical Department Soldiers, and, in war time, the Sanitary Corps. Its duties are primarily to conserve the health of the Army personnel, by every known means of preventive medicine, and to care for those whom the service renders unfit for duty, by sickness or injuries received either in combat or during peace. It is our job to keep the greatest possible number of men fit for the severe physical strains incident to war, or if rendered unfit for

*Presented before the Linn County Medical Society, Cedar Rapids, April 14, 1932.

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any reason, to restore them as rapidly as possible to a duty status. It is a rather startling fact that in time of severe fighting during a war, a large part of the army is under command of the Medical Corps, through its control of the disabled, and that this same corps is one of the greatest available sources of replacement of man power, especially after a war has lasted for some time.

Under ordinary circumstances the personnel of the Medical Department is drawn (by severe competitive examinations) directly from the ranks of the various professions enumerated above. The majority of the professional men of the Medical Department, that is to say, those composing the Medical, Dental, and Veterinary Corps, are selected from the upper group of their classes in the professional schools. A limited number of recent graduates from the medical schools are given an opportunity to take their interneships in our various military general hospitals. They are commissioned as first lieutenants in the Medical Corps Reserve and serve for a year, at the end of which period an examination determines their standing, and those found qualified are commissioned in the regular Medical Corps. This is a life position, provided the appointee's conduct is satisfactory, he keeps up with his profession, and passes the required examinations from time to time. He may resign at any time except in case of actual warfare, but few do, after once they have obtained the coveted commission.

Does the medical profession do anything more in peace time than has just been mentioned? Indeed it does, and unless you have given some thought and investigation to the subject, you will probably be surprised how much it does all the time.

To go back a little into the history of the Medical Department activities, a Medical Corps Reserve was organized in 1908 for the purpose of supplementing the regular corps in case of national emergency. At the outbreak of the World War, the Medical Corps was the only part of the Army that had any reserves, and the importance of such a source of trained or partly trained personnel was amply demonstrated. After the war, therefore, Congress authorized the national defenses as they now stand, which include the Regular Army, the National Guard, and the Organized Reserves, all forming the Army of the United States. Our department went actively at the task of organizing the medical forces, to be better prepared in case there should ever be another need for general mobilization. Of course the first and biggest source of personnel for a Medical Reserve organization was the large number of doctors and dentists who had served during the war. These were offered commissions in the Reserve, with one higher rank than they held at the close of the war. A very fine response resulted, and a start was thus made for the present organization, but this provided only for the moment, and it was immediately necessary to secure young men to fill up the ranks as the older ones stepped down and out. Sources of supply were sought among the students, and the Reserve Officers' Training Corps was organized, to interest the students in the medical schools, partly train them during their student days, and commission them in the Reserve Corps immediately upon graduation. This has proved a very satisfactory source of supply, but is still not sufficient. The Government cannot furnish enough regular officers to man all the schools, so there is a large number of students who are graduated without receiving any of this preliminary training, or knowing much about the Reserve or its purposes. We went further, and circularized every state in the corps area from the list furnished us by the state medical licensing boards, of those who had successfully qualified to practice in the respective states. We sometimes have rather startling results, as we have no means of knowing anything about the doctors, except that they have passed the state board examination. One man replied that he would be glad to serve, but that he was seventy-five years old and thought perhaps he was beyond the age limit. Another reply was from a woman, with a name which might be given to either sex.

Some of you may think that it is difficult to get a commission in the Medical Corps Reserve and hesitate to try on that account. In passing, I will just state that getting a commission is about the easiest thing there is to do, but keeping it requires a little more effort. One must be in sound physical condition, and between the ages of twenty-one and thirty-five, a graduate of a reputable medical school, and licensed to practice in his state. There is no examination required, although a board is appointed to make sure of the professional and ethical standing of the candidate, and he is appointed first lieutenant in the Medical Corps Reserve.

War is not a pleasant subject, yet we must at times discuss and plan for even disagreeable events, which seem to come more or less frequently in the lives of individuals and nations. Probably every sane and thoughtful person hopes that another war will never come, but the lessons of history would not greatly encourage that hope. Most of us have very vivid pictures in our memories of the events that occurred at the outbreak of the great war. Europe had been torn by war for about three years, and for most of that time

we had been assured that we would be "kept out of war," so very little preparation had been made for our entry in April of 1917. You recall the hurried mobilization of a few units, and their dispatch to France. You may also recall that about the first thing asked of us by the Allies was medical assistance, and our hospitals and ambulance companies were among the very first to go. Then came the hurried search for suitable sites for big camps, the draft, the rapid collection of the draftees in these only partly finished camps, their intensive training, and the departure for France. Many of you took an active part, and well remember the confusion and delays of the period. We were fortunate in having the Allies to hold the line for us until we could make preparation. This is not likely to happen very often, and so the plan now is to be ready, or at least partly ready, in case we are ever so unfortunate as to have to mobilize again.

The Reserves extend to every branch of the Army and Navy, but I am limiting my discussion to the Medical Corps, though in general it could be applied to all parts of the Army, and to the other parts of the Medical Department.

To carry on successfully the work intended for the Reserve Corps, it is essential that some organization exist, and the Regular Army personnel has been assigned as instructors for the National Guard and the Organized Reserves. It is our business to get the personnel, then so instruct them that they will have a fair working knowledge of their tasks. Naturally the men of the Medical Corps are trained professionally when we get them, so it is our concern to prepare them for the special duties that a doctor would be called on to perform when he is no longer working as an individual, but as a part of a great team, the Medical Corps. The Medical Corps in turn plays an important part in the much greater team, the Army.

A physician entering the Medical Corps must change from the highly individual work he has been doing, to group work, and from considering the welfare of the individual to that of the group. It is difficult to do less than one's best for any patient, but when national life is at stake, it becomes necessary to work for the good of the greatest number, often at the expense of the individual. He must learn to do many things that are not professional, in the strict sense of the word, yet are absolutely essential for the good of his team. Among these are the training of his men, the handling of men in groups, feeding, clothing and housing them, and in general preparing them, as well as himself, for the task ahead.

On the Medical Department is placed the tremendous task of collecting and transporting the sick and wounded from the active fighting front to the various places of first aid and definitive treatment. The novice must learn the methods of collecting and transporting the disabled, not only for the sake of their prompt treatment and restoration to duty, but to relieve the fighting forces of the handicap of their presence. To accomplish his mission successfully, he must know something of the function of the other branches of the service and the purpose of the effort, or in more technical terms, the "mission" to be accomplished.

In addition, there is that intangible something we call morale, which perhaps is the most important thing of all, for on it depends success. With a high state of morale, men will go through fire and water, suffer all sorts of hardships in the face of all sorts of disaster, without complaint. It is this state of mind that makes it possible for them to joke in the front line trenches, in shell holes and when going over the top. When morale is low, it carries the physical condition down with it, and defeat is almost certain. The ability to keep up morale, which is leadership in action, is a quality of highest importance.

The Medical Corps officer must learn to work anywhere, under all sorts of unusual conditions, and with much less equipment than he has been accustomed to. In other words, a high degree of adaptability is essential for a successful and happy service. It is a fact, confirmed many times in my own observation, that most doctors are highly adaptable, and can readjust themselves quickly to new conditions, perhaps to a greater extent than those in almost any other line of endeavor. It was a constant source of inspiration and pleasure to me in France, to see the ingenuity and resourcefulness displayed by the medical men in providing themselves with conveniences that were not available in the usual form to which they had been accustomed, but the results were often just as good as though we had had the vast stock of a first-class supply house to draw upon. Given the trained and adaptable man, almost any equipment will enable him to get results.

Perhaps a description of the efforts being made at present to train men for such emergencies will be of interest to you.

As stated above, we have three principal types of men available for training: (1) those who served in the World War, (2) the Reserve Officers' Training Corps and (3) those who are totally untrained. With the first, it is rarely needful to stress the need of training. They have been through an unforgettable experience, and need no argument to tell them that it would have

been a great advantage to them when called to the colors, if they had been at least partly trained. They accept the training with enthusiasm and are an invaluable support in the work we are trying to do. Often at real sacrifice to themselves, they attend the training camps, and give their best not only to prepare themselves, but to help in the instruction of others. During the winter season they attend, and often conduct, courses of instruction for their less informed brethren of the service, and their enthusiasm and willingness to work is the inspiration of all of us. We have some 2300 of them in the Medical Department of the Seventh Corps, and they are usually the leaders in civic affairs in their communities. It is surprising to note how often a doctor or dentist is the president of the Reserve Officers Association of his community.

We have extension courses covering subjects from the very beginning through all the difficulties of administrative and technical duties, our relations with the other parts of the army, and the particular responsibility of each branch of the service. For the sake of refreshing our memories we might enumerate the various parts of the Army, so you can see just what your Army is, and why it takes training and experience to make it work smoothly.

The Army is composed of two great parts, the line and services. The line is the active fighting part, and the services keep the men supplied and ready for their task. In the line we have the Infantry, Field Artillery, Coast Artillery, Air Corps, Cavalry, Engineers, and Signal Corps.

The services consist of the Medical Department, Adjutant General Department, Judge Advocate General, Quartermaster Corps, Engineer Corps, Signal Corps, Chemical Warfare, and Chaplains Corps.

The General Staff consists of the Chief of Staff, Assistant Chiefs of Staff, and in time of peace the War Plans Division.

From the line and the services are detailed officers on the General Staff for a period of four years. Naturally the majority of these officers come from the line, although the services are well represented. These officers are trained for this purpose in the Command and General Staff School at Leavenworth, Kansas, and at the Army War College and the Army Industrial College in Washington, D. C. These schools are highly technical and result in giving us a group of General Staff officers second to those of no other country in the world.

The technical staff consists of those detailed from the services on the staff of the commanding officer, as for example in a division we have the division surgeon in the Medical Department and the division quartermaster in the Quartermaster Corps on the staff of the division commander.

As we mentioned at the beginning, the Medical Department consists of several subdivisions, and is the largest of the services.

In addition to the training camps mentioned, there are a number of sources to which the reservist may turn for information and training. The extension, or correspondence courses, are available to any officer applying for them, and are all conducted under the care of regular officers. Our large military hospitals are available for those interested, and many take advantage of the clinical as well as the military features of these fine institutions. We have special courses for those young men who wish to qualify as flight surgeons, and acquire the special training and technic necessary. They must also pass the complicated physical examination required by the Government before a man is licensed as a pilot. One may be sent for duty with the National Guard, with the R. O. T. C. or the C. M. T. C. and take responsibility as he would in actual conflict. He may serve at one of our military posts from time to time, and so see the army in its everyday work. All of these offer interesting fields for training, and at the same time, a varied and novel experience; many of our doctors take all or part of their vacations in this way. We have recently established training courses at some of the great medical schools, where the physician may combine his clinical training with a course in military medicine. This offers a very popular and practical course for the more mature men, and three such courses have been given at the Mayo Clinic at Rochester, Minnesota, and one at the Washington University Medical School at St. Louis. Others are in process of organization.

One more fact that to me is most impressive concerning the importance of the medical profession in the scheme of national defense is that the doctor is the alpha and omega of the whole plan, that is, he is the first to be called, and the last to get away. Nothing can start until the physical examination has selected the men fit for service, and the game is not over until the last man disabled by the war has been restored to useful activity, or has died. The doctor makes or breaks the army, as by his careful or careless selection of men we have an efficient or an ineffective fighting force. By his keen judgment, he keeps the men fit for service on the fighting front, or he lets them drift back, when nothing is wrong with them, and so greatly cripples the strength at the front.

An interesting and instructive illustration of the

value of the Medical Department in conserving the fighting strength of an army is found in the comparison of the typhoid fever rate of the Spanish-American War with that of the World War. Approximately one man in seven had typhoid fever and one from each seventy-one died from this infection in the Spanish-American War. In the World War there were about four million men involved and 1,065 cases of typhoid fever were recorded; one from each 3,756 men, instead of one from seven. It staggers the imagination when we think of what the result might have been at the ratio of one in seven.

One great fact stands out from the last war. A number of nervously unstable men were allowed to enter the service, and we are now paying the price, in the great load on the Veterans' Bureau, that would have been eliminated had we then known of methods to recognize those not adjustable to such strains and stresses as come with a call to arms. The great challenge to the medical profession now is to find a method that will eliminate such material, should we ever have need to engage in another life and death struggle. Such men can function satisfactorily in the environment to which they are accustomed, and can maintain much of the necessary work at home, but break down very quickly under unusual conditions. We have all sorts of cases of so-called "shell shock," inadequate personalities, psychopathic states, and so forth, and you have only to visit any Veterans' Bureau hospital devoted to the care of nervous diseases to see the results. I have great confidence that we can find a rapid way to isolate such men, and keep them from the active strains and sudden changes of environment. So long as a person has a normal mind, we can use him in some position, and it seems to me if we ever mobilize again, every citizen, male or female, who has a normal nervous system, will be needed.

Doubtless some of you will be wondering what all this has to do with the medical profession in general, as you may be too old for service, of unsound health, or perhaps not at all interested. However, each one has an important place to fill. A popular government is the responsibility of all of its citizens. You may not be able to take an active part, or may not be selected for such a service, but you can, by your encouragement to the younger and able-bodied men of the profession, assist in this preparation and training, through your interest in the work of the agencies that are doing the actual training. I commend to your favorable consideration not only the Medical Corps Reserve, but the training of the young men in the universities, i. e., the Reserve Officers Training Corps, and the younger ones, or those not fortunate enough to attend the universities, in the Citizens Military Training Camps. Upon you often rests the decision as to whether a boy should attend one of these camps. I am fully persuaded that there is no other one individual in a community upon whom so largely rests the fate of the C. M. T. C. as upon the doctor. If you say it is a good thing, that it builds the body, that it strengthens the mind and moral fiber, then the boy goes. If you do not recommend it, because you are uncertain, or do not know about it, the boy stays home. If you have any doubt in the matter yourself, I say, go and see. There is a camp at Fort Lincoln, Bismarck, North Dakota, every summer in June. Others in this corps area are at Fort Snelling, Minnesota; Des Moines, Iowa; Fort Crook, near Omaha, Nebraska; Fort Leavenworth, Kansas; and Little Rock, Arkansas. It will be well worth your while to see these camps, to see many of these boys come in, stoop-shouldered and sloppy of carriage, often listless, and rebellious under authority, and see them leave, straight and snappy, with ideas of citizenship and responsibility never before dreamed of. It is one of the great forces building for better citizenship in the next generation.

The same remark applies to the training in our universities. Go and see what these boys are learning, and talk with them. They are old enough to have a definite opinion, and they will tell you the value the training has been to them.

There has been so much noisy misinformation spread abroad by various pacifist proponents, that some real facts are a relief. An investigation was undertaken and ten thousand answers received from R. O. T. C. graduates from fifty-four colleges. The answers showed that 97.1 per cent found that military instruction had a definite training value of its own; 95 per cent, that it made a unique contribution to education, 94 per cent that the training had not tended to produce in them a militaristic attitude inimical to world peace. Among the opinions given by the graduates was the following:

"Military training developed confidence, coordination of mind and muscle, and contributed practical training in leadership. The disciplinary exercises taught courtesy, respect for authority and the value of individual effort to mass accomplishment. The training contributed to an interest in national affairs and to a conviction that there are duties and obligations of citizens in time of peace. It gave an appreciation of the importance of health, neat appearance and erect carriage to individual progress. It contributed an ability to speak clearly and coherently before a group of men."*

*1931 Annual Report, Secretary of the Interior, Commissioner William G. Cooper, Bureau of Education.

The courses for the R. O. T. C. and C. M. T. C. are identical in that the ultimate objective of each is to form in the consciousness of each youth at an impressionable age that degree of patriotism which inspired his ancestors in their battle for freedom, and which has been such an important factor in the development of our country from obscurity to greatness among the world's nations.

This training sets a high standard in conduct and scholarship, and is well worth the effort it takes to conduct it.

In summary:

1. The Medical Department of the defense forces is a large one, that needs constant renewal to keep it efficient.

2. The trained men of World War experience are gradually becoming unavailable for active service, and younger men must take their places.

3. It is a tremendous advantage to have such younger men at least partly trained, and various agencies are available for their training. These are the Reserve Officers' Training Corps in the advanced schools; the Citizens' Military Training Camps, available for boys from seventeen to thirty-one, for a month each summer; the extension, or correspondence courses, available to any reserve officer applying.

4. It is highly desirable for all medical men who can qualify, to enter the Medical Corps Reserve of the Army, as soon as possible after graduating. It is a distinct asset to any young man to be selected to serve in this corps, and he should be encouraged by all members of the medical profession to keep up his work in this line.

5. The medical profession as a whole has a major responsibility in the matter of national defense, as the selection of men, maintenance of their physical fitness, and the care of the disabled are all functions of the profession. If unavailable for this duty personally, the physician can do much to maintain its high efficiency by his encouragement of the men who can qualify.

6. The medical profession has a very important and exacting task in preparing to eliminate those physically unfit for service, and particularly those who are nervously unfit. This type of man not only cannot render useful service to the Government, but he becomes a great liability by requiring care from those who should be engaged in more useful and necessary service.

These problems, I believe, merit your thoughtful and serious consideration.

A COMPARATIVE STUDY OF PERICARDITIS

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and
FREDERICK A. WILLIUS, M.D.
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Pericarditis is a relatively common condition, appearing at times as a serious disease resulting in death, at other times as merely an incident in other serious and often fatal diseases, and at other times as a wholly unimportant finding.

This study was undertaken to determine the quantitative relationship of the various forms of pericarditis, to attempt to clarify ideas concerning which associated diseases are etiologic, to investigate facts pertinent to the diagnosis of pericarditis and to ascertain the incidence of pericarditis in its direct relationship to the death of the patient.

Records of necropsy of The Mayo Clinic were thoroughly searched and carefully studied, and among 8,912 reports, 373 cases of pericarditis were found, an incidence of 4.2 per cent. This incidence is smaller than in previously reported investigations. Wells, in 1,048 post mortem examinations found evidence of pericarditis in 11.3 per cent of cases; Locke, in 3,683 post mortem examinations, demonstrated pericarditis in 16.6 per cent, and Musser and Herrmann, in 1,720 post mortem examinations found that pericarditis occurred in 17.7 per cent of the cases. Thus, in 15,363 post mortem examinations, evidence of pericarditis was found in 1,406 cases, an incidence of 9.2 per cent.

The various forms of pericarditis, and their incidence, were as follows: (1) simple fibrinous pericarditis, sixty-two cases (16.6 per cent); (2) pericarditis with effusion, 113 cases (30.3 per cent); (3) adherent pericarditis, 144 cases (38.6 per cent); (4) terminal pericarditis, forty cases (10.7 per cent) and (5) soldier's patches, fourteen cases (3.8 per cent).

SIMPLE FIBRINOUS PERICARDITIS (SIXTY-TWO CASES)

Simple fibrinous pericarditis without effusion is the most common form of pericarditis, in spite of the fact that its incidence in a study of post mortem examinations is not high. It is a precursor, in numerous cases, of pericardial effusion, purulent or otherwise, and of adherent pericarditis. It frequently exists as a minimal lesion, overlooked in the course of the life of the patient, and in no way interfering with the normal efficiency or behavior of the heart.

The pathologic process may be localized or ex-

tensive, and may involve the visceral layer or the parietal layer of the pericardium, or both surfaces may be involved. A fibrinous exudate is deposited on the serous surface, which when present in abundance gives the characteristic "shaggy" or "bread and butter" appearance.

Of the series studied, forty-three, or 69.4 per cent, were males, and nineteen, or 30.6 per cent, were females. The predominant occurrence of pericarditis among males is maintained throughout the group but the reasons for this are not clearly understood. The youngest patient in this group was only four months of age; the oldest patient was seventy-four years of age, and the average age of the patients was 48.2 years. Forty-four patients (70.9 per cent) were between the ages of thirty and seventy years.

Infection, as would be anticipated, was the basis for the pericarditis in the majority of cases. In fact, in only nine cases (14.5 per cent) did infection not appear to be causative, and these were instances of recent and healed cardiac infarction. Intrathoracic infectious disease occurred with greatest frequency; thirty-three cases (53.3 per cent) were recorded. These infections comprised pneumonia, fourteen cases; empyema, eleven cases; pulmonary abscess, four cases; pleuritis, two cases and pulmonary tuberculosis, two cases. Rheumatic fever was the apparent cause of fibrinous pericarditis in nine cases (14.5 per cent). Other types of infection appeared to be the cause of the pericardial involvement in eight cases (12.9 per cent). These cases comprised four of generalized peritonitis, three of pyelonephritis, and one of perforated gastric ulcer. Primary pericarditis of indeterminate bacterial type occurred in only three cases (4.8 per cent).

Associated disease of the heart occurred in thirty-one cases (50 per cent). Hypertensive heart disease occurred with greatest frequency; it was recorded in eleven cases (17.7 per cent of sixty-two). Coronary disease occurred next in frequency; it was present in ten cases (16.2 per cent), and comprised nine cases of recent and healed cardiac infarction. Rheumatic heart disease was present in eight cases (12.9 per cent); the valvular lesions were distributed as follows: mitral valve, three cases; mitral, aortic and tricuspid valve, one case each. There were two cases (3.2 per cent) of subacute bacterial endocarditis (Streptococcus viridans), in both of which rheumatic endocarditis affecting the mitral valve had occurred.

The remaining thirty-one cases of fibrinous pericarditis, without associated cardiac disease (50 per cent), were examples of the unmixed disease. The average weight of the hearts in this group was 251.9 gm. The average weight indicates that fibrinous pericarditis in itself does not cause the heart to become enlarged. In contrast are the weights of the hearts in cases in which there was associated cardiac disease. Here the average cardiac weight was 496.3 gm.; the associated lesions, to a large extent, were capable of producing considerable cardiac hypertrophy.

It is interesting to note that in twenty-two cases (35.4 per cent) of fibrinous pericarditis there was fluid in one or both pleural cavities. The fluid was confined to the right pleural cavity in nine cases; to the left, in six cases, and appeared in both pleural cavities in seven cases. The fluid was purulent in eleven cases, exudative in two cases, and transudative in nine cases.

Forty-two patients (67.8 per cent) made no complaint referable to the cardiovascular system. The outstanding diseases in this group comprised the following: carcinoma, six cases; nephritis and pneumonia, three cases each; cholecystitis, gangrenous appendicitis, hernia, adenomatous goiter, thoracic empyema and benign prostatic hypertrophy, each two cases, and one case each of vesical calculus, renal calculus, perinephritic abscess, hypernephroma, erythema multiforme, stone in the common bile duct, miliary tuberculosis, pulmonary tuberculosis, cellulitis of the neck, fractured femur, Addison's disease, pulmonary abscess, bronchiectasis, subdiaphragmatic abscess, duodenal ulcer, staphylococcic pyemia, fecal fistula, and arsenical poisoning. The predominant complaints of the remaining twenty patients (32.3 per cent) related to the circulatory system, and all of these twenty, in addition to having fibrinous pericarditis, had associated disease of the heart.

The presence of a pericardial rub was found to be the most characteristic sign of simple fibrinous pericarditis. Its presence may be of relatively short duration; it may temporarily disappear and then reappear. No characteristic electrocardiographic findings were noted. Any alteration in tracings was caused by associated diseases.

Death attributable directly to cardiac failure occurred in only twenty cases (32.2 per cent); the patients in all instances had associated cardiac disease. There were nine patients with coronary disease; five with hypertensive heart disease; four with rheumatic heart disease, and two with subacute bacterial endocarditis (Streptococcus viridans). The other forty-two patients (67.8 per cent) died of causes entirely unrelated to the heart. Death occurred from sepsis in twenty-two cases; from uremia, in five cases; from pulmonary embolism, in two cases and from Addison's disease and arsenical poisoning in one case each.

From this study it becomes apparent that in the majority of cases fibrinous pericarditis results from infectious processes. Infection was evident in fifty-three cases (85.5 per cent), and of these, in thirty-three cases (53.3 per cent) the infectious process was within the thorax.

Unquestionably, in the majority of cases, patients who have fibrinous pericarditis recover; death, when it occurs, results from an overwhelming infection and its complications.

PERICARDITIS WITH EFFUSION (ONE HUNDRED THIRTEEN CASES)

The pericardial cavity normally contains between 25 and 50 c.c. of clear, light amber fluid. This fluid may become altered in character and increased in amount when disease of the pericardium occurs, or when congestive heart failure is present. The influence of these alterations imposes a mechanical handicap on the heart on the one hand, and subjects the body as a whole to the effects of sepsis or toxemia on the other.

It is well known that the presence of pericardial effusion is not always recognized during the life of the patient, and it is questionable whether amounts less than 150 c.c. can be determined. Gravitation of fluid to dependent and concealed portions of the pericardial sac accounts for the fact that even accumulation of considerable quantities of fluid may not be readily detectable.

In the cases selected for inclusion in this group, the amount of fluid present was beyond the normal limit, or it was altered in character, regardless of the amount. The material was classified in the following manner: (1) acute purulent pericarditis, seventy-seven cases (68.1 per cent); (2) fibrinous pericarditis with effusion, thirty cases (26.5 per cent); (3) tuberculous pericarditis, three cases (2.7 per cent), and (4) non-inflammatory effusion, three cases (2.7 per cent). There were seventy-eight males (69 per cent) and thirty-five females (31 per cent).

The youngest patient was only eight months old, whereas the oldest patient was eighty-nine years of age, and the average age was forty-three and five-tenths years. The majority of the patients (72.5 per cent) were between the ages of thirty and seventy years.

Owing to the fundamental differences in the components of this group it is necessary to consider their etiology separately.

Acute purulent pericarditis was seen in seventy-seven cases. Sepsis was the basis for the pericardial invasion in every case. Intrathoracic infection occurred in fifty-seven cases (74 per cent), whereas infection elsewhere in the body occurred in twenty cases (26 per cent). Among the cases with intrathoracic infectious disease, empyema occurred with greatest frequency in twenty-eight cases, associated with bronchopneumonia in eleven and with lobar pneumonia in two. Bronchopneumonia occurred in ten cases; acute non-tuberculous pleuritis in five, and multiple pulmonary abscesses and mediastinitis, in four cases each. In two cases, hepatic abscesses ruptured into the pericardium, one of these being the result of actinomycosis. In two cases, pulmonary emboli terminated in necrosis and infection. In one case, hepatic abscesses with suppurative cholangeitis occurred, extending into the thorax, and in another, carcinoma of the lung was associated with local abscess formation. The remaining twenty cases resulted from infection outside the thorax, and included such conditions as puerperal endometritis, gangrenous appendicitis with peritonitis, brain abscess, scarlet fever, and so forth.

Fibrinous pericarditis with effusion occurred in thirty cases. In these cases the pericardial fluid was either normal in character but increased in amount, or normal in amount and altered in character but not purulent. Intrathoracic infection was again the dominant etiologic condition, occurring in twenty-one cases (70 per cent). Acute non-tuberculous pleuritis was present in twelve cases, bronchopneumonia in three cases, and mediastinitis in two cases. Empyema occurred in three cases, complicating bronchopneumonia in one case and lobar pneumonia in two cases. Aneurysmal erosion of the trachea with inflammatory extension occurred in one case.

Primary fibrinous pericarditis with effusion occurred in only nine cases (30 per cent). Tuberculous pericarditis with effusion was seen in three cases. There were three cases of tuberculous pericarditis, all associated with tuberculosis elsewhere in the body. Miliary tuberculosis occurred in one case, pulmonary tuberculosis in one case and in another case a tuberculous abscess of the left suprarenal gland was discovered.

Only three cases of non-inflammatory effusion occurred. Two of the patients were dying of congestive cardiac failure, and the other was dying as a result of pyelonephritis. The fact that edema fluid is now so readily and effectively removed by the use of the mercurial diuretics probably in part explains the smallness of this group.

Associated cardiac disease occurred in thirty-three cases (29.2 per cent). This is a considerably smaller incidence than that seen in association with fibrinous pericarditis (50 per cent). Hypertensive heart disease occurred in ten cases, in five of

which there was purulent fluid in the pericardial sac. Rheumatic heart disease was present in eight cases; the valves involved were the mitral in three cases, the aortic in two cases, the mitral and aortic in two cases, and the mitral and tricuspid in one case. Purulent pericarditis was present in six cases. Coronary sclerosis was noted in eight cases, in three of which acute infarction was present, and in one, healed infarction. In five cases there was evidence of previous or existent hypertension. Purulent pericarditis occurred in four cases. There were five cases of acute bacterial endocarditis; the cardiac involvement in all cases was but an incident in the course of septicemia. The pericarditis in three cases was purulent. Hyperthyroid heart occurred in one case, and the final case was one of large, saccular aneurysm of the innominate artery, with erosion and perforation of the trachea, in a case of syphilitic aortitis.

The average weight of the heart of patients with associated cardiac disease was 537.8 gm., whereas the weight of those with pericarditis only was 351 gm.

The pericardial content in cases of purulent pericarditis averaged 171.2 c.c. The smallest amount was 10 c.c., whereas the greatest amount was 750 c.c. In the cases of fibrinous pericarditis with effusion the average amount of fluid was 195.1 c.c. The smallest recorded quantity was 25 c.c. and the greatest was 500 c.c.

In pericarditis with effusion, as in simple fibrinous pericarditis, fluid frequently occurred in the pleural cavity. Eighty-eight cases (77.8 per cent), displayed fluid in one or both pleural cavities. The fluid was in the right pleural cavity in twenty-nine cases, in the left pleural cavity in eighteen cases, and in both sides in forty-one cases.

Symptoms and signs predominantly indicative of cardiac disease occurred in only fifteen cases (13.3 per cent). They comprised five cases of purulent pericarditis, seven of fibrinous pericarditis with effusion, one case of tuberculous pericarditis and two cases in which there was non-inflammatory effusion.

Ninety-eight of the patients (86.7 per cent) represented a great variety of diseases, including carcinoma, pneumonia, abscess of the brain, diabetes mellitus, and so forth.

The difficulties attending the diagnosis of pericardial effusion have already been mentioned. The most accurate means of identification is the teleoroentgenogram, whereby the contour of the cardiac shadow and its size may be determined. The characteristic contour of pericardial effusion is bulging of the lower angles, to which fluid gravitates, and eventually a filling out of the grooves of the heart, giving a rounded outline. The characteristic delineations of the normal heart become eradicated, resulting in the so-called "water bottle" shadow. Fluoroscopy is frequently helpful in portraying diminished and occasionally absent cardiac movement. Other signs that have limited value consist of distant and muffled heart tones and diminution or obliteration of the cardiac impulse. In the presence of large pericardial effusions, compression of the left lung may occur (Ewart's sign). Enlargement of the liver, with local tenderness, has been described as an early sign of pericardial effusion. It is believed to result from impingement of the orifices of the hepatic veins as they enter the inferior vena cava. However, a painful, enlarged liver is too frequently seen in various forms of cardiac disease for it to be considered a characteristic sign of pericardial effusion.

Electrocardiography revealed nothing characteristic in this series of cases.

Only ten patients (8.8 per cent) died of cardiac failure; eighty-eight (77.9 per cent) died of sepsis. The remaining fifteen patients (13.3 per cent) died as the result of diseases such as hepatic cirrhosis, nephritis, pulmonary embolism, and tuberculosis.

In cases of pericarditis with effusion, occurrence of infectious disease was enormous. One hundred ten patients (97.3 per cent) had active infection, and in 890 cases (78.7 per cent) the primary infectious process was in the thorax.

Adherent Pericarditis (144 Cases)

The fact that adherent pericarditis is not frequently recognized is proved by study of records of necropsy. Several reasons exist for this frequent diagnostic error. The disease may exist without producing symptoms and signs; the presence of associated cardiac disease may divert attention from the consideration of adherent pericarditis, and the academic overemphasis on so-called characteristic signs, which are rarely present, has frequently thwarted correct diagnosis.

There was a marked predominance of males. There were 100 males (69.4 per cent) and forty-four females (30.6 per cent). The youngest patient was ten years of age; the oldest, eighty-five years of age, whereas the average age was forty-eight and eight-tenths years. In 108 cases (75 per cent) the patients were between the ages of thirty and seventy years.

Etiologic diseases were ascertained in seventy-three cases (50.7 per cent). Rheumatic fever occurred in thirty-one cases (21.5 per cent) and was possibly causal in the other cases in which no rec-

ord of etiology was available. Intrathoracic infectious disease occurred in twenty-five cases (17.4 per cent) and comprised chronic obliterative pleuritis with involvement of the pericardium, fourteen cases; empyema, six cases; chronic mediastinitis, three cases; miliary tuberculosis, one case, and purulent bronchitis with pulmonary abscesses, one case. Cardiac infarction occurred in nine cases (6.2 per cent) resulting in considerable obliteration of the pericardial sac in the vicinity of the myocardial scar. Syphilis occurred in four cases (2.8 per cent) but its etiologic influence was not certain. In two cases aneurysm of the thoracic aorta was present and the pericardial involvement was possibly the result of pressure and erosion phenomena. Neoplastic disease with invasion of the pericardium caused partial obliteration of the pericardial sac in four cases (2.8 per cent). Metastasis occurred in two cases; in one from sarcoma of the stomach and in the other from sarcoma of the left ovary. In the remaining two cases, invasion of the pericardium occurred from direct extension, in one case from a primary carcinoma of the left lung and in the other from intrathoracic Hodgkin's disease.

No definite etiologic diseases were disclosed by the records of seventy-one cases (49.3 per cent). It seems probable that this group largely represents cases of fairly extensive fibrinous pericarditis, in which partial or complete obliteration of the pericardial sac occurred during the process of healing.

The cases were divided into three groups according to the nature of the adhesive process: (1) complete obliteration of the pericardial sac, fifty-three cases (36.8 per cent); (2) partial obliteration of the pericardial sac, seventy-nine cases (54.9 per cent), and (3) extensive parietal adhesions, twelve cases (8.3 per cent). Well marked calcification of portions of the pericardium occurred in eleven cases (7.6 per cent).

Associated cardiac disease occurred in seventy-seven cases (53.5 per cent). Coronary disease was present in thirty-one cases (21.5 per cent), in nine of which there was evidence of healed and recent cardiac infarction. Rheumatic heart disease with mitral stenosis occurred in twenty-five cases (17.4 per cent), complicated by coronary sclerosis in one case, by aortic insufficiency in another, by aortic and tricuspid insufficiency in one, by aortic stenosis in one, and by hypertension in one. Rheumatic heart disease with aortic insufficiency occurred in six cases (4.2 per cent), in five of which there were associated mitral lesions. Aortic syphilis occurred in four cases (2.8 per cent), including one case of dissecting aneurysm of the thoracic aorta with rupture into the pericardial sac, one case of aortitis, one case of aortitis with aortic insufficiency, and one case of saccular aneurysm of the ascending aorta.

The average cardiac weight in the cases with associated disease was 536 gm. In sixty-seven cases (46.5 per cent), adherent pericarditis was the sole cardiac lesion; these represented examples of the unmixed disease. The average cardiac weight in these cases was 413.4 gm., a difference of 122.6 gm. from those cases with associated cardiac disease. When the cases of adherent pericarditis without other cardiac disease were divided according to the nature of the pericardial involvement, the average cardiac weights occurred in the following manner: (1) complete obliteration of the sac, 415.8 gm.; (2) partial obliteration of the sac, 413.2 gm., and (3) parietal adhesions, 297 gm. From these data it seems justifiable to conclude that complete and partial obliteration of the sac both exert an equal and considerable mechanical handicap on the heart, whereas the influence of parietal adhesions is less burdening.

Only fifty-seven patients (39.5 per cent) complained of symptoms predominantly related to the cardiovascular system. They were, to a large extent, patients with associated cardiac disease; in fact, only ten patients with adherent pericarditis alone had outstanding cardiac complaints. Polyserositis occurred in only three cases of the group.

In the remaining eighty-seven of the 144 cases (60.5 per cent) a very miscellaneous group of diseases was found. Carcinoma occurred in twenty-seven cases, nephritis in eight, sarcoma in six, cholecystitis in four, septicemia in four, benign prostatic hypertrophy in three, pulmonary abscesses in three, empyema in three, pulmonary tuberculosis in three, brain tumor in two, goiter in two, ulcerative colitis in two, hepatic cirrhosis in two, chronic arthritis in two, ventral hernia in two, intestinal obstruction in two and the following diseases occurred in one case each: perforated peptic ulcer, purpura hemorrhagica, vesical calculus, psychosis, salpingitis, pernicious anemia, Hodgkin's disease, trifacial neuralgia, diabetes mellitus, bronchiectasis, cerebral hemorrhage, and pneumonia.

Murmurs were frequently present, but were not characteristic, and occurred particularly in cases in which associated cardiac disease existed. Pericardial friction rubs were present in only eight cases. There were no physical signs that occurred sufficiently often to allow them to be considered characteristic of adherent pericarditis.

There was a tendency to lowering of amplitude of deflections in the electrocardiogram, but this

was not sufficiently marked in the individual case to be of diagnostic significance. Dieuaide has shown that fixation of the electrical axis occurs when there is extensive fixation of the heart, such as with mediastinopericarditis and with parietal adhesions.

Death, directly attributable to the heart, occurred in fifty-seven cases (39.5 per cent). The syndrome of congestive heart failure occurred in thirty-nine cases, sudden death in twelve cases, and fatal emboli in four cases. Two patients died of subacute bacterial endocarditis (Streptococcus viridans) engrafted on old valvular defects. In the remaining eighty-seven cases (60.5 per cent) death resulted from the following diseases: carcinoma in twenty-four cases; pneumonia in nine cases; nephritis, sarcoma, empyema and pulmonary embolism each in six cases; pyelonephritis and peritonitis each in five cases, and septicemia, tumor of the brain, pulmonary abscess and ulcerative colitis each in two cases. The following diseases were represented by one case each: perforated peptic ulcer, goiter, intestinal obstruction, psychosis, meningitis, cerebral hemorrhage, pyemia, purpura hemorrhagica, pernicious anemia, hepatic cirrhosis, diabetes mellitus and Hodgkin's disease.

The average weight of the hearts of patients who died from heart disease was 625.7 gm., as opposed to 411.6 gm. among patients who died from other causes. The average age of patients of the former group was forty-three and one-tenth years, whereas that of patients of the latter group was fifty-two and four-tenths years.

We believe that the development of a clinical sense of suspicion regarding the possible existence of adherent pericarditis in all cases of actual or surmised cardiac impairment will distinctly increase the accuracy with which the disease is diagnosed.

terminal pericarditis (forty cases)

Active pericarditis disclosed after the death of the patient, but evidently not concerned in his death, has been noted for many years. It has been found particularly among patients who have died of debilitating diseases, and has been designated "terminal pericarditis."

The separation of cases of pericarditis into groups as undertaken in this study is not without difficulty, and it was particularly difficult to identify cases of terminal pericarditis. It is possible to confuse cases of simple fibrinous pericarditis with cases of terminal pericarditis. Therefore, in our attempt to minimize error, we included in the latter group only cases in which there was no evidence of healing of the inflammatory process.

There were twenty-eight males (70 per cent) and twelve females (30 per cent). The youngest patient was fifteen years of age; the oldest patient was eighty-three years of age, and the average age of the group was forty-eight and seven-tenths years. It is significant that only 7.5 per cent of the patients were less than thirty years of age.

The outstanding diseases in this group included carcinoma in thirteen cases, nephritis in ten cases, hyperthyroidism in four cases, benign prostatic hypertrophy in two cases and one case each of pneumonia, pulmonary abscess, Addison's disease, subacute bacterial endocarditis (Streptococcus viridans), esophageal diverticulum, gastrocolic fistula, cellulitis of the leg, pernicious anemia, septicemia, uterine fibromyoma and rheumatic heart disease. It is interesting to note that carcinoma and nephritis comprised 57.5 per cent of the entire group.

Associated disease of the heart occurred in twenty-one cases (52.5 per cent) although the heart was a major issue in only four cases. Hypertensive heart disease occurred in thirteen cases, coronary disease in three cases, rheumatic heart disease in three cases, subacute bacterial endocarditis (Streptococcus viridans) in one case and hyperthyroid heart disease in one.

The average weight of the heart in the cases in which there was associated cardiac disease was 438.2 gm., whereas in those cases in which terminal pericarditis was the only cardiac abnormality, the average cardiac weight was 302.3 gm.

Infectious processes were present in twenty cases (50 per cent) of the group of patients with terminal pericarditis, an incidence considerably less than in any of the other groups considered. Intrathoracic infectious disease occurred in twelve cases (30 per cent) and included seven cases of pneumonia, two cases of pneumonia with empyema, and one case each of the following conditions: empyema, suppurative mediastinitis, and purulent bronchitis. Infections elsewhere in the body occurred in eight cases and included such diseases as peritonitis, pyelonephritis, cellulitis, and ulcerative colitis.

Only four patients (10 per cent) died of heart disease, three from congestive failure and one from subacute bacterial endocarditis (Streptococcus viridans). The remaining patients died of the following diseases: nephritis, eleven cases, pneumonia, seven cases, peritonitis, five cases, hyperthyroidism, two cases, Addison's disease, one case, pulmonary embolism, one case, ulcerative colitis, one case and infectious processes elsewhere in the body, eight cases.

Terminal pericarditis occurs with greatest fre-

COMPARISON OF ESSENTIAL DATA CONCERNING THE FOUR MAJOR GROUPS OF PERICARDITIS

	Cases	Males		Females		Age, years		Etiologic infection				Associated cardiac disease		Average cardiac weight, gm.		Predominant cardiac symtoms		Cause of death			
								Intra-thoracic		Elsewhere								Cardiac		Other	
		Cases	Per cent	Cases	Per cent	Range	Average	Cases	Per cent	Cases	Per cent	Cases	Per cent	With associated cardiac disease	With pericarditis only	Cases	Per cent	Cases	Per cent	Cases	Per cent
Simple fibrinous pericarditis	62	43	69.4	19	30.6	0.33 to 74	48.2	23	53.3	20	32.2	31	50.0	496.3	251.9	20	32.2	20	32.2	42	67.8
Pericarditis with effusion	113	78	69.0	35	31.0	0.67 to 89	43.5	89	78.7	21	18.5	33	29.2	537.8	351.0	15	13.3	10	8.8	103	91.2
Adherent pericarditis	144	100	69.4	44	30.6	10 to 85	48.8	25	17.4	102	70.8[2]	77	53.5	536.0	413.4	57	39.5	57	39.5	87	60.5
Terminal pericarditis	40	28	70.0	12	30.0	15 to 83	48.7	12	30.0	8	20.0	21	52.5	438.2	302.3	4	10.0	4	10.0	36	90.0

quency in cases of long and debilitating illnesses, as shown by the high incidence of carcinoma and of nephritis. The recognition of terminal pericarditis is almost entirely based on post mortem examination.

SOLDIER'S PATCHES (FOURTEEN CASES)

Soldier's patches, or milk spots, are whitish, localized areas of fibrosis occasionally showing hyalinization, observed at times in the pericardium. They are believed to represent relics of healed, localized, non-obliterating pericarditis. There were ten males (71.4 per cent) and four females (28.6 per cent) with this condition. Three patients had associated cardiac disease. These pericardial lesions apparently in no way interfere with normal activity of the heart, and are purely of academic interest.

A summary is given in the table printed above.

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ROENTGENOLOGY AS AN AID TO OBSTETRICAL DIAGNOSIS*†

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Obstetrics has been practiced for centuries. Roentgenology is but a mere child in an age comparison, although Mullerheim[2] of Leipzig, in 1899, is credited with being the first to show positive radiographs of the fetus in utero. We feel that it will be of interest to indicate how roentgenology may aid the obstetrician and assist him in his diagnoses.

The diagnosis of pregnancy itself is fraught with difficulties, notwithstanding John B. Deaver's famous saying that the main cause of an abdominal tumor in a female is pregnancy. An x-ray examination will often help (See figures 1 and 2). According to Edling,[4] "early in the third month of pregnancy, it is possible to obtain good roentgenograms of the fetus," and Kuegle reported the same thing. Recently A. Jerome Thomas has shown x-rays and diagnosed pregnancy in the sixth to eighth week. Thus, relatively early, a definite diagnosis can be made.



Fig. 1. Age 25 years. Pain in pelvis of several months duration. Operation disclosed a dermoid cyst.

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The x-ray measurement of the pelvis is a relatively simple procedure, and as Thoms[5] remarks, "we employ it in any case in which exact knowledge of the pelvic inlet is desired. This includes all cases in which pelvic contraction is suspected and all cases of suspected disproportion at term."

The fact that the fetus is dead can often be established by x-ray. This was reported by Spald-



Fig. 2. X-ray of specimen seen in Fig. 1.

ing, and at the same time by Homer in 1922. Spalding states, "It seems that very shortly after intra-uterine death, the brain tissue shrinks, which produces a typical overlapping of the fetal skull bones." "This overlapping gives a picture quite different from the overlapping produced by moulding."[1 and 6] If twins are present, a marked difference in the size of the two skeletons is significant of the death of the smaller, and a marked disproportion between the skull and the remaining skeleton also suggests death of the fetus.

The diagnosis of the position of the fetus is often made by x-ray; likewise the presence of more than one fetus. Triplets were demonstrated on the roentgenogram by Moller[4] in 1920.

Perhaps the most useful and by all means the most interesting use of the x-rays in obstetrics is in aiding the diagnosis of pathologic conditions other than death of the fetus. Case,[3] in 1917, was the first to report anencephaly diagnosed before birth by x-ray (see figures 3 and 4). Hydrocephalus has also been so diagnosed, although a large fetal skull seen within the uterus may be normal. A papyraceous fetus should be diagnosed correctly, although in our case,[7] a diagnosis of a prolapsed arm was made. This mistake is not likely to happen again, and merely illustrates that with improvement in technic, equipment, and a close cooperation between the obstetrician and roentgenologist, more light is shed on conditions which previously were not diagnosed before delivery.

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Fig. 3. Age 21 years. Entered eight months pregnant, but at no time could fetal heart tones or position be determined. Patient an epileptic. One week after entrance membranes artificially ruptured and five hours later an anencephalic monster weighing 708 gms. was delivered. Uterine cavity contained about 3000 c.c. of amniotic fluid.

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Fig. 4. X-ray of specimen seen in Fig. 3.

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FECAL IMPACTION

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Fecal impaction, coprostasis or stercoraceous tumor, as it is variously termed, is an accumulation of fecal material, usually hard, dry and stuck together in a mass, which is arrested at some point of the large intestine through an organic or spasmodic narrowing of the intestinal canal (Figure 1). This accumulation occurs most frequently at the cecum, the sigmoid flexure, or in the ampulla of the rectum. It may also occur in sacculi or diverticuli of the intestine. There is no set periodicity of the bowel movements and impaction of feces is frequently encountered, not only as a cause of obscure symptoms, but actually endangering life.

In a series of forty-six cases reported by Gant[1] the impaction was found in the rectum thirty-one times; in the sigmoid, six; in the sigmoid and rectum, five; in the colon, sigmoid and rectum, once; in the descending colon, once; in the transverse colon, once, and in the cecum, once.

ETIOLOGY

When from any cause the fecal current is sluggish, or from carelessness with reference to the act of defacation, the feces are abnormally retained, fecal material may be arrested and dammed, forming a mass which cannot be voided by nature. The impacted mass is clay-like, or dough-like in consistency. It is not one homogenous mass but is composed of small round lumps compressed together by the muscular action of the bowel, and may be of such enormous proportions as to fill the rectum and sigmoid.

Impaction may occur at any age; in infants, because of improper feeding and neglect; in delicate adults and in the aged because of weakened musculature and diminished secretion and sensibility. During adult life the more common causes are neglect, obstructive conditions of the rectum and sigmoid and painful lesions of the anal region. Charcoal, bismuth and magnesia have a tendency to form concretions which often become the nucleus of the fecal mass. Over-distension of the colon by large and frequently repeated enemas, is a common cause; also the prolonged use of a diet leaving an abnormally bulky residue, as an example of which the Irish famine of 1846 is often cited. The people at that time subsisted wholly on potatoes, and ate the parings and even the diseased portions, with the result that impaction was of frequent occurrence. The Scotch peasantry, who subsist largely on coarse oatmeal, are likewise much afflicted. Fruit seeds, and the pits of cherries, kernels from green corn on the cob, gall stones and scybala from diverticuli and recesses of the large bowel may all be found in these impactions. Intestinal paresis following laparotomy or peritonitis or the stasis incident to recumbent posture, as in childbirth, or fracture of the femur, may often be the immediate cause.

SYMPTOMS

The symptoms in general are those of ordinary constipation, followed in a short time by griping and heaviness or sensation of weight in the region of the impaction. In each individual some of the following symptoms will overshadow the others. Diarrhea is caused by the increased secretion due to the local irritation of the fecal mass. This spurious diarrhea is sometimes blood stained, accompanied by mucus and flatus, and there may be an almost constant dribbling. Impaction is always to be thought of when this type of diarrhea is found.

Constipation or partial obstruction is always

present. Complete obstruction only rarely occurs, but abdominal distension, tympany, colicky pains, eructation and nausea are complained of, and the colon is sometimes stretched to such enormous proportions that complete atony occurs.

PRESSURE SYMPTOMS

A sensation of fullness and weight in the pelvis or perineum is often present, accompanied with vesical or rectal tenesmus. Any or all of the pelvic organs may be disturbed functionally, and



Fig. 1. Dilated rectum which had recently been relieved of a large impaction.

uterine or ovarian colic and irritable bladder are often noted. Pressure of the weighted bowel on the pelvic and abdominal veins may cause swelling of the lower limbs, varicose veins, varicocele and by pressure on the sacral plexus of nerves, darting pains in the groins, loins and legs.

Lumbago and sciatica are not infrequently due to pressure of a fecal mass on the sacral plexus of nerves. It is not uncommon to find these pains on the right side accompanying impaction in the cecum and ileum and it is more frequent to have similar left-sided pain due to pressure from the mass in the rectum or sigmoid flexure.

In children and young adults relief is often immediate after the pressure is removed. In older people the relief may not be so prompt, some definite damage may have been done to the bowel and convalescence may be protracted over several weeks.

Rectal tenesmus and irritability of the anal sphincters is not always present, but when the impaction is in the lower rectum these symptoms are prominent, and are accompanied by a dull ache in the sacrum or down the sciatic nerve. These reflex pains due to pressure on the plexus and the sympathetics are often productive of nervous and mental derangements. In children choreiform movements or convulsions have been noted, and in adults melancholia is not infrequent. All of the systemic evidences of coprostasis such as anemia, headache, anexoria, disturbance of the cardiac and respiratory functions may go on for months or even years. Tuttle[2] reports two cases of mental derangement due to retention of feces. The amount of material thus accumulated is surprising. Cammidge[3] refers to one mass which weighed forty-four pounds. Such a mass presents symptoms which may be mistaken for hepatic hypertrophy, or tumor of the stomach, liver, spleen, or uterus and in younger women for pregnancy. Sawyer[4] says "in extreme cases the tumor may displace the heart." Sometimes there is such a loss of weight, together with progressive muscular weakness, that malignant disease and pernicious anemia are diagnosed.

DIAGNOSIS

A large accumulation of feces may be undetected for a long time. It may be treated for dysentery and diarrhea, or as some malignant growth.

The diagnosis of fecal impaction is usually easily made. When the accumulation is in the rectum



Fig. 2. Ballooned rectum producing a rectocele. This patient suffered repeatedly with impaction of the rectum.

or sigmoid, a digital examination followed by proctoscopy will determine the trouble. In the colon, however, the diagnosis is not so easily made. The tumor must be outlined by careful abdominal palpation and differentiated by exclusion of all other possible conditions. In thin individuals, the doughy feel of the mass can be appreciated through the parietes, but in stout patients or those with thick abdominal walls, the impaction may

simulate volvulus, intussusception, or neoplasm. In the colon the impaction may occur in the form of several small tumors arranged in a row, like a string of beads, and it is necessary to differentiate this condition from carcinoma, causing stricture or pressure stenosis, diverticulitis, strangulation, torsions, peritonitis, or acute intestinal obstruction. This decision is not always possible despite certain classical symptoms which are presumed to exist. In the aged the picture is always obscured.

The fact that fecal impaction always occurs secondary to some other local disturbance will stimulate a careful investigation in every patient and thus cancer will not be diagnosed when the tumor is only a stercoraceous mass, nor will a cancerous or syphilitic stricture be treated for constipation.

TREATMENT

Preventive. During surgical convalescence or protracted confining illness and also in the case of the aged, fecal accumulations must constantly be guarded against. A sedentary life always predisposes to impaction and a dose of castor oil or infusion of senna may be necessary to sweep out the bowel, supplemented with an occasional enema, and followed with an ounce of mineral oil or milk of magnesia each night to prevent accumulations. Once the bowels are free it is essential to see that they work regularly each day.

Impaction in the Rectum. This is the most common location of the impaction, where it may cause acute suffering, and first of all it is important to withhold purgatives in all cases of impaction. The size of the fecal mass precludes unassisted expulsion by the patient and the active peristalsis set up by the cathartic can only increase the individual's suffering and expose him to new dangers. The gut, already thinned and inflamed from pressure against the fecal mass, may be further stretched and traumatized, and rupture may even occur.

A recent impaction may often be broken up and removed by means of enemas and irrigations, and unless the symptoms are urgent, these should be given a thorough trial. Soapsuds injections are sometimes sufficient, although the addition of glycerin and oxgall add to their efficiency. The following may be used by the patient himself:

Glycerin .....2 drams
Oxgall (inspissated) .....2 drams
Soapsuds .....8 ounces

This enema is given slowly with low pressure and retained as long as possible. It may be repeated every three hours.

Good results are often obtained by using four ounces each of hydrogen peroxide and water, used as an enema and retained as long as possible. If the mass is low in the rectum, the mixture may be injected directly into it by means of a long syringe nozzle. This treatment may be repeated every three hours, and often the mass is so disintegrated that the next day it can be washed out with irrigagation. The peroxide, when brought in contact with organic matter, liberates oxygen bubbles, which often soften and break up the impacted mass. Of course, this method is only applicable where the accumulation is in the rectum or sigmoid.

If the above mentioned methods have failed or if the patient's condition is urgent the mass must be removed by mechanical means. Various special scoops have been devised for this purpose but an ordinary uterine curette, a pair of placental forceps or a large calculus scoop will be found quite satisfactory, or, in an emergency, a kitchen spoon with a long handle will serve. Such instrumentation must be conducted through the speculum, and, as a rule, it is well to give a general anesthetic, and dilate the sphincter so that ready access may be obtained and the whole impaction removed with a minimum of traumatism to the rectum. The mass may be steadied by an assistant pushing down over the pubes. In female patients two fingers introduced into the vagina will also assist in bringing the mass into view and in breaking off pieces. Patience is enjoined in such procedures, in order that the mass may be removed a little at a time so as not to injure the mucous membrane. (Figure II). In some instances the mass is expelled spontaneously when the spastically contracted sphincter relaxes as the patient passes under the influence of the anesthetic.

When the impaction has been cleared away the rectum should be irrigated with warm boric acid or normal salt solution and a careful search made for traumatized patches in the mucosa. If any abrasions, lacerations or ulcerations are found, they should be painted immedately with 20 per cent Argyrol solution.

When the whole bowel has been cleaned up, the mucous membrane should be well anointed by slowly instilling into the bowel two ounces of warm olive oil or mineral oil. This oil injection should be retained as long as possible and repeated night and morning for several days to insure an easy evacuation each day. Colonic irrigations should be given to wash out any masses which may lodge in the sigmoid and to subdue the inflammation of the mucous membrane. After the fecal mass has been removed these irrigations should be given daily for two weeks and then every other day for the next period of two weeks. These flushings must be given carefully because dislodged fecal material may easily be forced up higher in-

stead of expelled. This is very technical work which is well done only by those especially trained and must never be entrusted to inexperienced assistants.

As soon as the physician is certain a passage has been effected through the bowel and also during the course of colonic irrigations, it is advisable to give the patient one compound cathartic pill every night to prevent a recurrence of the impaction. Drastic purgatives must be avoided because they increase the inflammation of the intestines which occurs in long standing cases of fecal impaction.

Impaction resulting from organic stricture, new growth and spasm of the hypertrophied sphincter will require treatment for the underlying cause. If the patient's condition will permit, operation should be performed immediately; if not, he should be kept under close observation until circumstances justify a proper procedure.

Impaction in the Sigmoid. Impaction located in the sigmoid is a very serious problem. Here the mass cannot be reached by instruments, and irrigations, together with abdominal massage, must be relied upon. The enema should be administered slowly to assist in its retention, and while the fluid is being held the colon should be massaged carefully. In thin individuals it is possible to break up the mass by external abdominal manipulations. A long tube should be used, with several gallons of water containing one dram of sodium biborate to the quart and ten minims of oil of peppermint to the gallon.

Impaction in the Cecum and Colon. This is the most difficult impaction to relieve because irrigation is not so effective and the flushings must be repeated for several days before the fecal masses are dislodged.

Having removed the fecal obstruction and relieved our patient of his immediate difficulty our obligation has just begun, although unfortunately the physician is too often dismissed. Usually these patients are undernourished, have relaxed abdominal muscles, are vagotonic and psychasthenic. They are chronically fatigued and many suffer with visceroptosis. Treatment therefore includes teaching the patient how to live within his physical limitations.

The patient must receive appropriate instructions designed to prevent a recurrence of the impaction and be particularly impressed with the necessity of watching the evacuations to be certain that they are sufficient in quantity and character to assure complete elimination.

He must be taught the essentials of diet and nutrition. He must receive a full diet with a liberal quantity of butter, cream and other fats, plenty of starchy and green vegetables and cereals and one or two quarts of milk a day. Eggs and meat increase the toxemia and sufficient proteins may be obtained from the milk and legumes (beans, peas and lentils), although a small portion of tender meat (beef, lamb, chicken or fish) may be allowed once a day. Particularly should he be taught the diet and other measures necessary to overcome constipation and how to correct intestinal stasis and the resulting toxemia.

The physical training of most persons is neglected and the physician must educate his patients regarding the exercises which tend to develop every voluntary muscle of the body. Especial attention should be paid to deep breathing exercises and to those that develop the chest and abdominal muscles.

Exercises. There are many good systems of exercise in treating constipation, any of which may be used. We have modified a group of exercises of considerable vogue with the idea of using every large group of voluntary muscles in the body, and have taught the movements to many patients, who report that they enjoy their morning exercises and bath, followed by massaging the entire surface of their bodies with the palms of their hands. One advantage of these exercises is that they require no apparatus, and they can be carried out in a very small room, most of them in a sleeping car berth. The patient begins by performing each exercise four times and increases one time each day until he is doing each exercise sixteen times before the morning bath. The routine may be repeated at night if the patient is not too greatly fatigued.

I. Exercise in the horizontal position; the chin is touched to the chest.

II. Exercise for strengthening the abdominal muscles; the body is raised from the horizontal to the sitting position, and the legs kept straight.

III. Flexion of thighs, bringing knees up to chest.

IV. With knees extended, the legs are raised to the vertical position.

Tonics are always indicated for several months, both to meet the systemic needs and to overcome the intestinal atony. Nux vomica or its alkaloid strychnin in 1/60 grain doses three times daily heads the list.

Should the above outlined plan of treatment fail, the only recourse is colostomy and removal of the mass through the opening. Fortunately such procedure is rarely necessary, and the persistent use of irrigations and massage is usually successful. If, however, it becomes obvious that such treatment will not be effective, operative measures must be

undertaken while the patient has the strength to withstand them.

Sudden complete obstruction or rapid prostration of the patient may make it necessary to perform a colostomy for temporary relief. In such instances the site of the operation will be determined by the location of the impaction.

Thewlis[5], in his Geriatric Aphorisms says:

"Many an old person has been saved by active catharsis. If you do not know what to do for the patient give him a cathartic."

"An old person who is ill in bed, presenting indefinite symptoms, will gradually fail and there seems no hope for him. Many times a dose of castor oil followed by a colonic irrigation will make a complete change in the patient in a few hours."

"In many instances symptoms due to prostatic hypertrophy clear up when the intestinal tract is cleaned. For this purpose saline laxatives and colonic irrigations should be employed."

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CHEST PAIN CAUSED BY SUPERFICIAL THROMBOPHLEBITIS*

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Pain in the chest is a complaint for which we as physicians are often consulted, but to determine the cause of this pain is sometimes a perplexing problem. Frequently we find ourselves at a complete loss to determine its etiology.

Chest pain varies in character, severity, location, and in the constitutional symptoms that accompany it. When the subjective and objective symptoms are typical, or fairly so, the diagnosis is, of course, not difficult. Frequently, however, there seems to be no cause for a certain chest pain even after a complete history and examination, this being perhaps more often the case in young individuals. The probabilities as to the cause of this pain vary under certain conditions. For example, angina pectoris and coronary sclerosis are rarely found before the age of forty and so can be ruled out in young individuals. Pleurisy is perhaps more frequent in the young.

In the analysis of chest pain the following conditions should be considered, especially in those cases in which symptoms and findings are not characteristic: myalgia, intercostal neuritis, herpes zoster, diaphragmatic hernia, at times renal colic, an adherent pericardium, referred pain caused by arthritis of the thoracic portion of the spinal column, lesions of the spinal cord, and neurasthenia with cardiac neurosis.

To this list we can now add another interesting condition, superficial thrombophlebitis. In 1922, Fiessinger and Mathiew[1] reported three cases of thrombophlebitis of the thoraco-abdominal vein following grippe-like infections. Two of these cases chiefly involved the abdominal portion of this vein, the third apparently involved the thoracic portion. This was the first report of superficial thrombophlebitis and there were no further reports until 1931, when Dr. George A. Williams,[2] of Atlanta, reported a case. In 1932 Dr. Worth B. Daniels[3] reported five more cases which he had seen in the past three years. Since there are thus only seven cases so far reported, the condition is apparently rare and of sufficient interest to justify reporting an eighth which I have recently observed.

Thrombophlebitis is a thrombosis conjoined with inflammation of a vein or of veins. Da Costa[4] divides phlebitis into the plastic and infective types. Plastic phlebitis can be caused by such diseases as rheumatism, gout and advanced phthisis. In the latter disease, in my experience, it has always heralded the exitus in a few days. At times it may also be associated with some other febrile malady or constitutional condition. Usually it has its origin in a wound or injury as a result of extension to the vein of a perivascular inflammation, or in an embolus. With the onset of phlebitis, a thrombus usually forms because of the destruction of the endothelial coat of the vessel, and this clot may give rise to emboli, may be absorbed or may become organized. The aseptic clot usually organizes and the vein becomes permanently narrowed or blocked. A septic clot may soften and break up.

Infective phlebitis is a suppurative inflammation of a vein arising from infection, perhaps from suppurating perivascular tissues, perhaps from the blood stream or in the portal system from infective emboli. The clot from suppurative phlebitis cannot be absorbed and cannot organize.

To quote Spalteholz,[5] "The vein thoraco-epigastrica may be single or doubled for long distances and extends in the anterior or lateral wall of the trunk, in the subcutaneous tissue, from the axilla as far as the fossa ovalis. Its middle portion is devoid of valves, in its upper part valves direct the blood upward to the axilla, in its lower part downward to the fossa ovalis. Above, the vein opens into the vein thoracalis lateralis, below it goes either separately or united with the vein epigastrica superficialis into the vein femoralis." (See figure I.)

* Presented before the Des Moines Library Club, December 7, 1932.

No etiology was determined in the reported cases, except in one, in which a low-grade infection from an abdominal wound may have been a factor. In none of these cases is there a history of trauma or syphilis. There is no evidence of

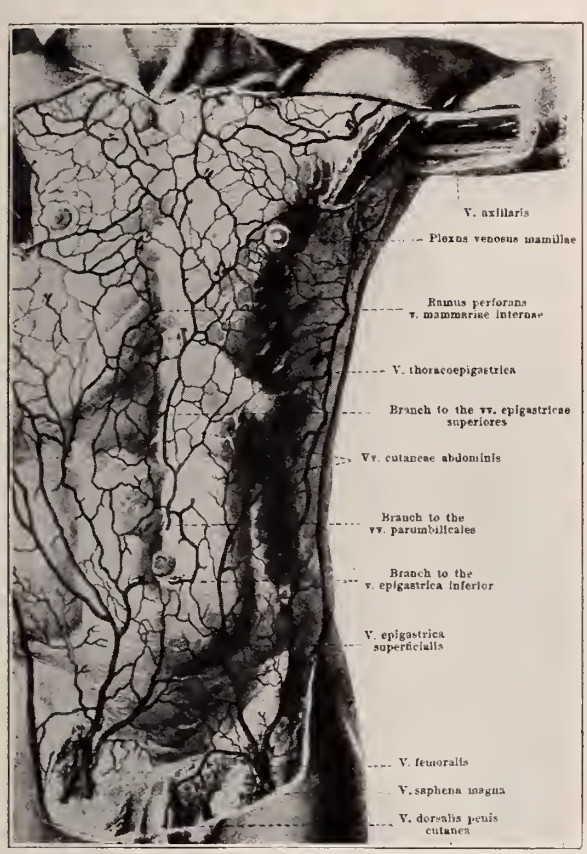


Fig. 1. After Spalteholz. Figure clearly shows the vein under discussion—view thoraco-epigastrica.

any infection of the adjacent skin or subcutaneous tissue nor any condition to produce local stasis. Thus, it would be difficult to state at present whether this is of the plastic or infective type but it would appear to be the former.

The symptomatology in the reported cases was quite uniform. The patients complained of pain or soreness in the anterior or lateral chest wall. It varied from mild discomfort to pain of sufficient intensity to make work difficult. The pain may be intensified in various ways, directing the individual's attention to the condition. In four of these cases, it was intensified by deep breathing and in one case the chest had been strapped for pleurisy. Since the vein runs lengthwise across the ribs at their point of greatest movement, it is naturally placed under tension which in the presence of inflammation very likely accounts for the pain. In two cases the pain was intensified by raising the arm and here again the increased tension might be responsible. In the remaining cases the pain was aggravated by pressure, coughing, or sneezing. One patient consulted his physician because of dyspnea. In this case there was unequal expansion resulting reflexly from this inflammation. All complained of tenderness either with or without pressure. In no case were there any constitutional symptoms.

On examination of the chest a visible cord can be seen extending along the anterior lateral portion. It is better delineated when the patient raises his arm above his head, and in some cases may be seen only in this way. The vein is easily palpable and mildly to severely tender on palpation. There is no other evidence of inflammation other than this tenderness and redness. This would suggest the importance of palpation in the examination of a chest for determining the cause of pain. Elevation of both arms followed by inspection of the chest wall is also advisable.



Fig. 2. Showing thrombophlebitis of the thoraco-epigastric vein.

The right and left sides were involved in an equal number of cases in this series. In one case, after the condition subsided on one side it later appeared on the opposite side.

Both sexes were affected in the series, the males

more frequently than the females. The age periods were as follows: there were five cases between the ages of forty and fifty years, inclusive, one patient was twenty-six and another thirty-six years of age.

The diagnosis is obvious from the subjective and objective symptoms. The vein involved is in the region of the thoraco-epigastrium and so is very likely the one that is here concerned.

All patients recovered without difficulty or complications. The pain may disappear in the course of a week or two. The objective symptoms may also disappear soon after but in some cases the vein remains palpable for several weeks, then slowly disappears.

The treatment is symptomatic, consisting of the application of ice for the first few days, then heat. This may not even be necessary. Aspirin and codein may be used for pain. Many of the patients are able to be up and about at their usual duties.

REPORT OF A CASE

On April 14, 1932, a man thirty-six years of age entered the office complaining of soreness in his left chest. This he stated was much worse on raising his left arm. He had stepped to the mirror and on raising his arm had seen an enlarged vein extending down along his chest. About four days before he had noticed a tender area on his left chest and thought he had injured it in some way but was totally at a loss to know how he could have done so. He had had no cold and felt perfectly well in every other way.

His temperature and pulse were normal. There were no other findings of importance on examination other than the palpable and tender superficial vein in the left chest. It was first visible just lateral to the nipple and extended downward to the left subcostal region. It was about the size of a small goose-quill. On raising the left arm the vein became more prominent, especially between the ribs, and produced more pain. At its lower end there was a small area of redness and increased tenderness suggestive of the initial point of thrombosis. The chest was negative.

This patient returned to the office frequently for observation. The pain left in a week and when the patient was seen May 10, only a slightly palpable cord remained. He had remained at work throughout, with no special treatment.

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ACHLORHYDRIA

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The subject of gastric analysis, and more especially of achlorhydria, has received renewed attention within the past few years. The occurrence of achlorhydria as a part of many symptom complexes, as well as in apparently normal persons, is being re-emphasized and re-investigated. It is the purpose of this paper to review some of the recent literature.

Detection. There is no general agreement as to the best method of gastric analysis. The practice of taking multiple specimens at short intervals has spread widely, but many workers are still content with a fasting specimen and one taken sixty or ninety minutes after ingestion of the test meal. No conclusive study of the comparative value of the two procedures has been made. Whatever method is used, all workers agree that secretion is often delayed, making it necessary to continue collection of specimens for at least sixty and preferably for ninety or one hundred and twenty minutes after the meal. Moreover it is known that some persons who show no free acid at one examination will subsequently show normal acidity. For this reason achlorhydria is not proved by a single examination unless histamine or neutral red is employed; if neither is used, repeated examination is necessary.

Two aids to gastric analysis are now employed and are thought to be of great value in differentiating true achlorhydria from pseudo-achlorhydria. These are the subcutaneous administration of histamine and the intravenous use of neutral red.[1,2,3] It has been demonstrated conclusively in both animals and human beings that histamine is a powerful stimulant of gastric secretion. As Hitzrot states,[2] it is believed that histamine "produces acid in thirty minutes if gland structure capable of secretion remains." Certainly there are many studies indicating that the use of histamine reduces the number of cases of achlorhydria, and these results to some extent invalidate the immense amount of work which was done before the advent of histamine regarding the incidence of achlorhydria in various clinical conditions.

Some few workers object to the use of histamine because it is an unnatural stimulant which is never presented to the stomach in food, and because in analyzing gastric secretion one wishes to know, not what the stomach can do under the influence of an unnatural stimulant, but rather what it is capable of doing in the performance of ordinary digestion. This quandary over the advisability of using histamine epitomizes very well the whole muddle in regard to achlorhydria. If the demonstration of achlorhydria is important because free

acid is in itself physiologically necessary, then the use of histamine, which is not an article of diet, might conceivably be a step in the wrong direction. If, on the other hand, hydrochloric acid as an element of gastric secretion is not very important in itself, and if its presence or absence is of significance only because its secretion is thought to parallel that of some unknown factor or factors not yet identified but very important, then the use of histamine is justified as a means of demonstrating a striking decrease in gastric secretory function under any kind of stimulant. In addition one can dispute the argument that histamine is an "unnatural" stimulant. It is of course produced within the body and some workers at present consider that it is in fact one of the natural endogenous stimulants of gastric secretion.

The use of neutral red involves somewhat different principles than does histamine. It is a dye which is injected intravenously and excreted through the gastric mucosa and recovered in the gastric contents. Unlike histamine, it acts to little if any extent as a stimulant of gastric secretion. However those who have used it, [1 and 2], state that a stomach capable of secreting free acid will excrete neutral red and that results secured with neutral red parallel very closely those secured with histamine.

Etiology and Pathogenesis. Many people have theorized concerning this phase of achlorhydria but very few have done any experimental work or have made any thorough pathologic studies. In about 1880, when the phenomenon of failure of gastric secretion was first described, it was thought to be due to organic causes, possibly anadenia. No accurate description was made of the lesions, partly because no one solved the problem of rapid postmortem autolysis of the gastric mucosa. The organic explanation was the general one in spite of the lack of proof until Einhorn, writing in about 1890, cited cases of achlorhydria studied during life in which the gastric mucosa was examined immediately after death and apparently normal gland tissue found. For this reason and also because of his observation of cases of transient achlorhydria he proposed the theory that normal gastric secretion is largely a matter of normal innervation of the stomach and that achlorhydria is a nervous dysfunction.

Another worker, Martius, observing the familial occurrence of achlorhydria on several occasions, suggested that it is a congenital anomaly. He, too, thought that the failure of secretion, even though congenital, was largely functional and occurred without demonstrable organic changes in the stomach.

In about 1904 Knud Faber [4 and 5] began the only extensive work which has ever been done on the pathogenesis of achlorhydria. As there seems to be a recent renewal of interest in his work, Faber's views will be given in some detail. He stated that achlorhydria is due to changes in the gastric mucosa produced by irritative factors—chemical, physical, toxic, bacterial—which are brought in contact with the stomach either in ingested material or by virtue of their presence in the blood stream. These changes he called "gastritis", which according to him is not a superficial catarrh but a lesion of the glandular parenchyma comparable to hepatitis or nephritis. His method of studying the problem was to inject a ten per cent formalin solution into the abdomen immediately after death. This sufficed to fix the gastric tissue which could be removed and studied at leisure. He studied a large series of cases which had showed achlorhydria and reported definite lesions in the vast majority of these. In some cases there was merely round cell infiltration between the glands. In others the round cells had accumulated in follicle-like formation producing what Faber called "follicular gastritis". In advanced cases the glandular tissue was encroached upon and in some cases completely destroyed.

Faber thinks that the specific irritative agents responsible for gastritis include alcohol and perhaps some foods and also infectious material from the teeth and sinuses. The achlorhydria of tuberculosis, hyperthyroidism and pregnancy he attributes to blood-borne injurious agents which produce parenchymal changes in the gastric glands comparable to changes found in the liver and kidneys secondary to various constitutional disorders. The achlorhydria of carcinoma of the stomach he attributes either to the effect on the whole gastric mucosa of a toxin produced by the malignant lesion, or, possibly, he would say that gastritis may have preceded and have been in part responsible for the carcinoma.

Faber amassed a great deal of proof for his ideas. Nevertheless, the conception of gastritis as the chief cause of achlorhydria has not been accepted widely. This is partly because other workers have been unable to duplicate his results and partly because Faber's own material is inadequate to prove his point, especially in regard to achlorhydrias attending certain conditions such as hyperthyroidism. The literature in the last few years, however, shows an increasing emphasis on the importance of gastritis as a cause of achlorhydria. In many cases this seems to represent a very uncritical acceptance of Faber's work. For example, in a recent article on the subject, Faber's idea is accepted without criticism and the author throws in the suggestion that in addition to the

injurious agents suggested by Faber, "too hot or too cold foods, rapid eating, and excessive use of sweets or soda fountain beverages are potent factors in causing gastritis."[6] The author adduces no proof for this. Faber's work is so thorough that it deserves critical consideration, and its implications are too important for it to be applied indiscriminately.

Clinical Conditions Accompanied by Achlorhydria

1. There are many cases of achlorhydria discovered more or less accidently in apparently healthy persons. Estimates as to the number of such persons vary from a fraction of one per cent to three or four per cent of the population. No doubt some of these variations in figures are due to different methods of gastric analysis, and the number of such cases probably will be reduced by the use of histamine or by repeated analyses. Even with these methods, however, achlorhydria is encountered in seemingly well persons and the question of its significance arises. It must always be borne in mind that some few may represent potential cases of pernicious anemia or of posterolateral sclerosis. Also, before one could say that an achlorhydria was of no importance, one would have to rule out a mild secondary anemia or an atypical Graves's disease, to mention only two possibilities. The demonstration of achlorhydria therefore calls for the most careful type of examination and follow-up.

2. A second group includes those patients with gastro-intestinal complaints which bring them to the doctor, in whom achlorhydria is found and nothing else. Do these people present any recognizable clinical picture and if so can it be attributed to the achlorhydria? Considering the many physiologic functions assigned to the hydrochloric acid of gastric juice, one would think that its absence would be attended by some definite symptoms, but apparently this is not the case. It is true that some workers describe a syndrome of "gastrogenous diarrhea" accompanied by flatulence and vague colicky pains which they attribute to achlorhydria. These workers state that such patients often improve after the administration of hydrochloric acid. Still other investigators think that constipation is a more common sequel of achlorhydria than is diarrhea, and that it may be relieved by acid. A very extensive study on this question was made by Keefer and Bloomfield,[7] who, in a survey of sixteen hundred gastro-intestinal cases, concluded that there are no digestive complaints attributable to achlorhydria alone. Their conclusions have not been disproved.

3. Most writers seem agreed that achlorhydria increases in incidence in persons past middle life and that in many such persons the absence of acid is of no significance. Keefer and Bloomfield[8] think that this achlorhydria of middle and old age, which they regard as a more or less normal decrease of function, has served to confuse our ideas in regard to the significance of achlorhydria in many clinical conditions, especially gall bladder disease. It must be pointed out that there is not complete agreement on this question. Rafsky states that he has studied the gastric secretion in seventy-five apparently well women ranging in age from seventy to ninety-one. Among these he found only one case of achlorhydria. He cannot agree that achlorhydria among the aged is too frequent to be of small significance when found.

4. A temporary achlorhydria exists in many acute infectious diseases and in many chronic debilitating diseases, especially in children. The cause is not known. Faber, of course, thinks that it is due to a gastritis similar to the nephritis or hepatitis which may complicate these same conditions. No very thorough studies have been made on the duration of such achlorhydrias, and the importance, if any, which impaired gastric function may have in the clinical picture.

5. Achlorhydria in Graves's disease is an interesting subject. Faber found absence of free acid in as many as fifty per cent of a series of cases of Graves's disease and other workers have given similar figures. No work has been done to show whether or not there is any correlation between the occurrence of achlorhydria and the predominance of gastro-intestinal symptoms such as is seen in some cases of hyperthyroidism. It would seem to be an interesting possibility. Not that the achlorhydria would be responsible for the gastro-intestinal symptoms, but it might be due to the same mechanism. In this connection there is a suggestive article by Brown[8] on the "Influence of Hyperthyroidism on the Secretion of Hydrochloric Acid." As he states, there is some difference of opinion as to whether hypo- or hyperthyroidism is more likely to be attended by achlorhydria. There is a great deal of both clinical and experimental evidence to indicate that in hyperthyroidism there is a marked tendency toward achlorhydria.[7,9,10] This is especially true clinically of exophthalmic goiter, but less true of adenoma with hyperthyroidism. Brown himself cites eleven cases of achlorhydria and five of marked hypo-acidity in twenty cases of hyperthyroidism. His theory regarding the cause of the achlorhydria is, in effect, a restatement in modern terms of the neurogenic theory of Einhorn. He points out that thyroid secretion seems experimentally to be a sensitizer of the autonomic nervous system, especially of the cervico-thoracic sympathetics. Some of the modern work on the nervous control of gastric secretion, he states, tends to

show that the secretion of the acid and water fractions is stimulated by the bulbosacral or parasympathetics and inhibited by the cervico-thoracic sympathetics. Brown suggests, therefore, that in hyperthyroidism there is increased tone of the latter and so an inhibition of the secretion of acid.

6. The achlorhydria of carcinoma of the stomach needs no particular discussion. Figures on its incidence vary, some being as low as fifty per cent, others as high as ninety per cent. Bloomfield in several articles emphasizes the importance of considering the volume of gastric secretion as well as the acidity in making a diagnosis of carcinoma. He rarely finds the combination of low acid and low volume in a benign lesion; and conversely, the combination of normal or high acid and high volume is rarely, if ever, present in malignancy.

7. Achlorhydria is almost as common a finding in gastric lues as in carcinoma of the stomach, and therefore is of no help in differentiating the two. The cause of the achlorhydria is not known definitely, although the lesion is usually an extensive scirrhous one and may produce achlorhydria by involvement of all of the acid-secreting tissue.

8. The rate of incidence of achlorhydria in gall bladder disease and its significance, if found, have been debated for years [6 and 11]. One reads articles citing a very high incidence and others proving that it is relatively uncommon. Those who believe that achlorhydria is a frequent and important accompaniment of gall bladder disease usually endeavor to explain it by employing some of Hurst's former arguments relative to the part played by achlorhydria in pernicious anemia. That is, they state that hydrochloric acid is an important factor in inhibiting bacterial growth in the stomach and duodenum, and that its absence is conducive to infection which ascends to the gall bladder. Or they may argue that both chronic cholecystitis and chronic gastritis are secondary to a focus of infection elsewhere, producing gall bladder symptoms on the one hand and achlorhydria on the other. All of this is so vague that one is inclined to accept a recent article of Cheney's reporting eighty-one cases of cholecystitis in which gastric analyses were made and the only frequent finding was the presence of bile in the gastric contents.[12]

9. In pernicious anemia the incidence of achlorhydria is not one hundred per cent, as often stated. In fifty-four cases of pernicious anemia Faber found four with free acid. This serves to emphasize the fact that, contrary to Hurst's original views,[13] the absence of acid probably is not of importance in producing the pernicious anemia picture. The recent work of Sturgis, Castle, Heath, Townsend and others tends to show that there is a substance excreted by the stomach and as yet unidentified which acts on certain proteins to produce a factor necessary for the formation of red blood cells. The fact that the achlorhydria is present is due, not to any essential importance of the acid, but to the coincidence that its secretion probably parallels that of the unknown factor. That they should not invariably coincide would be only natural, and would explain the cases of pernicious anemia without achlorhydria and also perhaps the persistence of achlorhydria in the remissions of pernicious anemia.

10. There are, then, certain conditions having a mysterious similarity to pernicious anemia and yet differing from it. These are sprue, pellagra and posterolateral sclerosis. Achlorhydria is a very common finding in all. These conditions are also linked to each other and to pernicious anemia by a tendency toward anemia, sore tongue, and gastro-intestinal complaints. A very interesting article on this subject was written in 1930 by McLester.[14] He cites cases in which the decision as to whether the diagnosis is sprue, pellagra, pernicious anemia, or posterolateral sclerosis is almost impossible to make. Although achlorhydria runs through all of them it is very doubtful if it is the important connecting link. McLester suggests that in the other conditions of this group, as in pernicious anemia, the achlorhydria is a mere accompaniment of a more fundamental gastric defect. Already this has been suggested in sprue. Castle has shown that some cases of sprue are relieved by his partially digested beef muscle. And recently, in a discussion by Heath of a paper on achlorhydria, he cited a case of sprue which had a blood picture of pernicious anemia but normal gastric acidity. Gastric contents taken from this patient and incubated with beef muscle and subsequently fed to a pernicious anemia patient had no effect, showing that in at least this one case of sprue the factor was lacking which is also absent from the gastric juice in pernicious anemia.

11. Finally, much of the current interest relative to achlorhydria is concerned with its occurrence and significance in secondary anemia. The observation that many cases of secondary anemia show achlorhydria is not a new one. Einhorn in 1903, Faber in 1913, Hunter in 1923, and Faber again in 1924[15] reported cases showing the typical blood picture of secondary anemia and also achlorhydria. In spite of these reports and many others the conception of an "achlorhydric secondary anemia" did not receive much attention from the practicing physician until recently. There is a comprehensive article on the subject by Witts.[16] Defining anemia as a hemoglobin of less than seventy-five per cent, he reviews one hundred and

eighty cases. Forty-seven were of unknown etiology and of these, thirty had achlorhydria. The clinical picture which Witts gives of achlorhydric secondary anemia is as follows: It occurs more frequently in women than in men, usually in middle or past middle life. The blood picture is that of a microcytic anemia with low color index. No megaloblasts are seen in the blood smear. The Van den Bergh test is negative, icteric index normal, reticulocytes and fragility normal. Platelets are low in number and white blood counts are normal or reduced. The symptoms are not clear-cut, but include fatigue and nervousness, sore tongue, diarrhea and dysphagia. A common feature in the histories is that of exacerbations with pregnancies. On physical examination the patient usually is of the asthenic type, often prematurely gray, presenting pallor without icterus. Splenomegaly is often present and spoon nails are common. The disease is rarely fatal but does not tend to improve spontaneously.

This picture as given by Witts is more or less accepted by other workers.[17] The syndrome has been variously called achlorhydric secondary anemia, chlorotic anemia, microcytic anemia, idiopathic hypochromic anemia, and primary hypochromic anemia. In addition to clinical observations there are other more convincing proofs of the existence of such an entity. The response to therapy is one of these. Arsenic has been tried without effect and liver is valueless. Large doses of iron, however, are almost specific. Most workers report the best results with iron ammonium citrate given in doses of at least sixty grains a day, and usually ninety or even up to one hundred and eighty grains daily. With such treatment there is a definite improvement in the anemia, as striking as, if somewhat more gradual at times than that seen in the response of pernicious anemia to liver. Hydrochloric acid is of no effect as far as the relief of the anemia is concerned, but does seem to help symptomatically at times in relief of digestive disturbances. Some workers think that copper should be furnished as well as iron. For example, Mills[18] cites cases treated effectively with Blaud's mass, grains xxx t.i.d. and copper carbonate grain 1/48 t.i.d.

Even more significant than this response to specific therapy is the study of bone marrow pathology. Kaznelson has examined the bone marrow from the sternum in cases of achlorhydria with secondary anemia and has found an excess of normoblasts, thirty to forty per cent of the cells of the erythrocytic series found in the marrow being normoblastic in type in contrast to the normal twenty per cent. He found no evidence of increased hemolysis, such as one sees in pernicious anemia. He believes that the disturbance in this secondary anemia is a defect in the maturation of normoblasts to erythrocytes. He also studied the bone marrow of a case before and after iron therapy. A clinical remission had been induced by the iron and the bone marrow showed a decrease in normoblasts after this treatment.

If such an entity as Witts describes exists, the reason for and the importance of the achlorhydria are as mysterious as in the other conditions in which it occurs. Witts offers the suggestion that perhaps here, as in pernicious anemia, the failure of the stomach to secrete acid is paralleled by a failure to secrete some other more important substance, and that the absence of this second substance is really responsible for the anemia. He even suggests that the same factor may be responsible for both pernicious anemia and secondary anemia which represent two different types of bone marrow response to the same deficiency. Dameshek[19] suggests the same possibility. In support of this idea, Witts cites cases of achlorhydria which at one time showed the blood picture of secondary anemia, but which later slipped over into the primary anemia picture. Against this is a recent comment of Heath's. He took the gastric contents of three cases of achlorhydria with secondary anemia and found it just as effective as normal gastric juice in acting on beef muscle to produce a substance which would induce remissions in pernicious anemia.

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QUININE AMBLYOPIA OR RETROBULBAR NEURITIS CONSEQUENT TO THE GIVING OF OPTOCHIN BASE*

Grace M. Sawyer, M.D., Woodward

There has been a growing interest in the use of ethylhydrocuprein — numoquin or optochin base as a therapeutic agent in the treatment of the pneumococcic infections. A case of blindness, amaurosis, amblyopia or retrobulbar neuritis developing during the treatment of such an infection is the incentive for this paper. That this drug caused the retrobulbar neuritis cannot be doubted since the picture resembles the classical one seen and described by such men as Morgenroth and Uhthoff.

In 1911 Morgenroth and Levy published a discussion of the specific toxicity of the drug for pneumococci which stimulated interest in the use of ethylhydrocuprein, numoquin or optochin base. It was used in hundreds of patients suffering from pneumonic infections. Three years later Morgenroth called attention to the danger to the optic nerves from its use. In a comprehensive survey of the literature up to that time, Uhthoff concluded that visual disturbances occur in from three to four per cent of patients treated with ethylhydrocuprein-numoquin or optochin base. He found about fifty cases reported up to 1914. He had three clinical cases, two of which came to autopsy, and he gave histologic studies of the posterior portions of the eyes and optic nerves. In two of his cases there was hyperemia of the disc and blurring of the retina with some widening of the retinal vessels associated with transient amaurosis lasting for several hours. While changes in ganglion cells could not be studied because of postmortem changes, he found Marchi's degeneration in the nerve sheaths.

In the fifty cases reported, none of the patients remained permanently blind; many had prolonged serious consequences, permanent pallor of the papilla, narrowing of the vessels, contraction of the visual fields and a diminished light sense, even with good visual acuity.

The alkaloids of the cinchona group have been found to belong to two groups: the levo and dextro-rotatory isomers. Ethylhydrocuprein-numoquin or optochin base, a levo-rotatory isomer, is synthetized from quinine, which is first converted into hydroquinine, then into hydrocuprein and lastly into ethylhydrocuprein. It is a white powder insoluble in water but soluble in alcohol, oils and fats. It is available in a coated tablet and a powder. The hydrochloric acid in the stomach converts this insoluble base into soluble hydrochloride. Some neutralizing agent or compound is given to prevent its too rapid absorption. Milk is used since it also provides all necessary nourishment. This method of administration was originated by Felix Mendel in 1915. He reported twelve cases in which patients were thus treated with five doses of .3 gm. each daily until the fever ceased. One patient showed transient amblyopia lasting for twenty-four hours after which treatment was resumed without further ill effect. Baldwin and Rhoades reported in 1921 the complete absence of dangerous symptoms in a series of patients treated at Bellevue Hospital, the insoluble base being used. Cross in his series of 126 cases observed no unfavorable ocular symptoms.

CASE REPORT

The patient was an unmarried woman, twenty-one years of age. The family history was negative. Personal history: The patient had had pneumonia at the age of five years and the ordinary diseases of childhood. On February 7, 1932, she became ill with bronchopneumonia following an attack of influenza from which she had apparently recovered. She had been working four days when she again became ill. Her temperature ran high from the beginning. The third day it reached the maximum of 106°. Administration of optochin base or numoquin was begun in the prescribed manner, 4 grains every five hours with milk for three days. The treatment was interrupted after the eighth dose because the patient complained of blurred vision and difficulty in hearing. The blurring of vision increased and reached its maximum February 13, at which time she could not distinguish hand movements or daylight from darkness. Her pupils were dilated and fixed and her hearing was more markedly affected. On February 14 there was some improvement in vision. The pneumonia at this time was improving: the temperature running only to 102 degrees.

On February 17 she was seen by an ophthalmologist; the pupils were dilated and the reflexes were sluggish. She could detect only hand movements. The fundus examination showed marked ischemia of the retina and nerve head, the vessels were contracted and the disk margins were clear. The patient went home on February 18 and on February 21, eleven days after the beginning of the optochin base treatment, she could read large headlines. Improvement from then on was gradual and fairly rapid.

Fundus examination May 2 showed fairly normal disks with margins clear and the vessels only slightly contracted. The pupils were moderately dilated and contracted normally to light. Form

*Address of the President, Thirty-fifth Annual Session, State Society of Iowa Medical Women, Sioux City, May 4, 1932.

fields were contracted 15 to 30 degrees. Color fields were much contracted for blue and green.

Vision R 20/40 N. P. 4½" J. 1.
Vision L 20/40 N. P. 4½" J. 1.

The treatment was potassium iodide and pilocarpin internally. Eserin and dionin were used in the eyes. Frequent hot packs were applied over the eyes.

CONCLUSION

This was without doubt a case of ethylhydrocuprein-numoquin or optochin base poisoning. The diagnosis was based on the sudden onset after the administration of considerable dosage of the drug, the characteristic ophthalmoscopic picture and the bilateral attack. The high lights of this case were blindness in severe form, a rare occurrence, and very little influence of the treatment on the blindness. Disability is permanent, even in mild cases.

MEETING OF THE BOARD OF TRUSTEES

The Board of Trustees of the Iowa State Medical Society met in the state society offices on Thursday, December 15. Those in attendance were the three trustees, Drs. Oliver J. Fay, Gordon F. Harkness and E. M. Myers; the president, Dr. W. W. Bowen; the secretary, Dr. Robert L. Parker, and the editor, Dr. R. R. Simmons.

Dr. C. W. Ellyson, of Waterloo, was appointed sixth district councilor to succeed the late Dr. W. L. Hearst, until the next annual session of the House of Delegates.

Submitted bids for the 1933 contract for printing the JOURNAL of the Iowa State Medical Society were studied and discussed. The contract was again let to the Wallace-Homestead Company of Des Moines.

MEETING OF THE COMMITTEE ON MEDICAL ECONOMICS

The Committee on Medical Economics of the Iowa State Medical Society met in the offices of the state society on Friday, December 23. All members of the committee were present. The New York plan of an arbitration committee composed of members of the state society and of compensation insurance companies to settle disputes in compensation cases was discussed and further study outlined.

ADDITIONS TO UNIVERSITY FACULTY

Seven new appointments to the faculty of the College of Medicine at Iowa City have been announced: Dr. Phillips Thygeson, assistant professor of ophthalmology; Dr. C. G. Barer, assistant in neurology; Dr. L. J. Harris, assistant in obstetrics and gynecology; Drs. A. C. Richmond and A. R. Kohler, assistants in ophthalmology; and Drs. A. R. Jirus and W. C. Kleinpell, assistants in otolaryngology. These appointees will begin their new duties on or about the first of January.

RESOLUTION OF MILITARY SURGEONS CLUB *

Whereas: Provision has been made by the Congress of the United States of America, for the expansion of medical and surgical care of war veterans by building additional veterans' hospitals, and allowing for care in a non-service connected disability. And

Whereas: This procedure puts the United States Government into direct competition with the individual doctor and hospital, and

Whereas: This procedure deprives the doctor and hospital of lawful earnings, and

Whereas: This procedure leads to unnecessary and wasteful expenditure of millions of dollars annually, contributed by the taxpayer in the form of taxes, and

Whereas: This procedure has led to its abuse by those for whom it was not intended, and

Whereas: This procedure is not economically sound, be it therefore

Resolved: That the Military Surgeons Club of the Iowa State Medical Society strenuously oppose any further construction of veterans' hospitals, and that the present program should be halted at once, and be it further

Resolved: That the Militory Surgeons Club favors the adoption of the Shoulder Bill, or one similar, for the aid of veterans actually disabled in the World War, and be it further

Resolved: That the Military Surgeons Club is opposed to extending medical and surgical aid by the United States Government, to those suffering from non-service connected disabilities and urges its repeal by Congress, and be it further

Resolved: That a copy of this resolution be forwarded to each Senator and Representative from Iowa, and to the secretary of each county medical society in Iowa.

The above resolution was written by the officers of the Military Surgeons Club of the Iowa State Medical Society, pursuant to instructions to the officers by the members assembled in regular meeting at the Hotel Martin, Sioux City, Iowa, on May 4, 1932.

AARON C. CONAWAY,
President,
HAROLD A. SPILMAN,
Vice President,
THOS. F. SUCHOMEL,
Secretary.

* It is the request of Dr. A. C. Conaway, Chairman of the Military Affairs Committee, that the members of the Military Surgeons Club preserve this resolution and carefully study it, so that any desired amendments may be proposed at the Military Surgeons Club dinner during the next annual session.

State Health Commissioner's Page

D. C. Stuhlsatz, M.D.

SMALLPOX IN IOWA*

The following lines begin the discussion of Smallpox in Evanson and Maunsell's "Practical Treatise on the Management and Diseases of Children," published in Massachusetts in 1848.

"This eruptive fever, though once the destroyer of entire nations, has now, thanks to the genius of Jenner, almost ceased to engage the attention of physicians. Its continued existence, however, should not be forgotten, nor any neglect of the proper precautions against its ravages be induced by security, even though that has now been enjoyed for nearly fifty years."

Most of the states along the Atlantic seaboard followed the example of certain European countries in making smallpox vaccination in early childhood a mandatory procedure. In many of our midwestern states, on the other hand, this method of disease prevention has remained optional. Morbidity records in various parts of the United States, reflect this difference in policy. In 1931, 22,413 cases of smallpox were reported from nineteen states, chiefly in the middle and far west and comprising a population of close to 49,000,000, a rate of 46 per 100,000. Contrast with this the nearly 49,000,000 people living in fifteen states along the Atlantic coast, among whom there occurred but 1,063 cases of smallpox, or 2 per 100,000 population. In a number of midwestern cities, one out of every 100 suffered an attack of this disease in 1931. Were this same proportion to apply in the east, New York City would have reported over 42,000 cases of smallpox in 1931. As a matter of fact, but one single case was reported!

SMALLPOX IN IOWA	
1928	1,921
1929	1,913
1930	3,044
1931	2,225
1932	1,151

Although smallpox had as early as 1848, "almost ceased to engage the attention of physicians," the authors of the above mentioned book showed keen appreciation of human nature by the qualifying statement, "its continued existence, however, should not be forgotten."

Several practical difficulties tend to retard smallpox prevention work in Iowa. First, the disease has for the most part been so mild that many have come to disregard it; second, members of non-medical cults, opposing modern methods of disease prevention, have incited prejudice in certain areas, and third, some "would rather have smallpox than the sore arm Bill Jones had." Severe reactions, not uncommon in the past, unfortunately still occur from time to time, where the scarification method is practiced.

Physicians can contribute largely to what is, and apparently must continue to be, an educational process, by: (1) Reporting every case of smallpox and indicating on the report card the vaccination status of the patient. (2) Encouraging the more general adoption of the multiple pressure method of vaccination, as recommended by Leake of the United States Public Health Service, and by many physicians. (3) Urging parents in a calm but insistent manner to have babies vaccinated in their first year. (4) Encouraging local school officials and boards of health to require for school children a certificate of successful vaccination or revaccination, or exclusion from school for 21 days, as soon as smallpox invades a community. (5) Regarding a single case of smallpox as a potential or threatened epidemic.

PREVALENCE OF DISEASE

	Nov., 1932	Oct., 1932	Nov., 1931	Most Cases Reported from
Diphtheria	72	97	83	Polk
Scarlet Fever	154	164	201	Polk, Pottawattamie
Typhoid Fever	2	41	16	Black Hawk, Jefferson
Smallpox	68	11	258	Dubuque, Clinton
Measles	9	7	13	Woodbury, Black Hawk
Whooping Cough	47	34	111	Black Hawk, Des Moines
Cerebrospinal Meningitis	3	3	7	Polk
Chickenpox	498	207	356	Dubuque, Black Hawk
Mumps	82	25	14	Allamakee, Black Hawk
Poliomyelitis	2	10	37	Henry, Webster
Tuberculosis	38	48	33	Marion, Woodbury
Undulant Fever	4	3	7	(For State)
Syphilis	177	229	173	(For State)
Gonorrhea	186	248	299	(For State)

* The Medical Economics of this problem was discussed in the February, 1932, number of the Journal of the Iowa State Medical Society, page 85.

The JOURNAL of the Iowa State Medical Society

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ON MEDICAL CARE

Medicine has been developed as a profession upon a basis of medical ethics; ethics which demand a personal and intimate, confidential contact between physician and patient. The medical practitioner, busy with the exacting duties of his profession, has rarely paused to give consideration to the methods of mechanical efficiency of "big business." He has long been keenly alert to the problems concerned in rendering a better and more efficient service and his studies have been directed in these channels. He has been interested in the quality of professional service rather than the cheapness with which this service could be dispensed.

Disturbed by the apparent high costs of medical care, a committee, unofficial in character, came into existence some five or six years ago to investigate this problem. In many ways the activity of this committee appears unfortunate. In its inception, the committee openly stressed the alleged high costs of medical care and thereby directed attention to the costs of illness in an unfair light, and in its conclusion recommended a plan for the socialization of medical care inimicable to the welfare of the medical profession. In spite of these facts, the tremendous amount of data accumulated by the committee in its five years of research has served a highly useful purpose in causing the attention of the profession to be focused on the economic aspects of medical practice.

The medical profession has watched with much interest the activities of the committee as reflected in its twenty-six separate reports. The JOURNAL, through a series of editorials and special articles, has attempted to keep its readers abreast these reports and offer a background for the evaluation of the various plans of medical practice proposed. Agreeable to this program, in the last issue of the JOURNAL, an attempt was made to summarize the final report of the Committee on Costs of Medical Care. This summary was presented without discussion. In this issue the majority report of the committee is discussed editorially and some of the more obvious objections to the plan of socialized practice recommended have been analyzed. In the JOURNAL for February we propose to discuss analytically the minority report, directing especial attention to the attitude taken by the American Medical Association toward the report of the Committee. We believe that every physician will wish personally to review these printed reports of the Committee, but it is hoped that the summaries given in the JOURNAL will assist those not having easy access to the original in evaluating the essential recommendations. In the minority report of the Committee (representing organized medicine), we find in paragraph seven, "the minority recommends the development by state or county medical societies of plans for medical care." Agreeable to this suggestion, we present in this issue an article especially written for the JOURNAL by an Iowa physician well acquainted with many of the local problems of medical practice within this state. The writer of this article suggests a basically different plan of medical practice from that which is offered by the Committee on the Costs of Medical Care. The plan is not presented as a final thought, but rather to stimulate new considerations, and perhaps open the way toward a workable solution of this problem.

POLK COUNTY SOCIETY DISCUSSES COSTS OF MEDICAL CARE

Believing that the final report of the Committee on the Costs of Medical Care must be considered as vitally important by the individual practitioner of medicine, and in full realization that when a new order of medical practice is required organized medicine should point the way, the Des Moines Academy of Medicine and Polk County Medical Society will set apart the January meeting of the society for an analytical consideration of this report. The chief speaker of the evening will be Dr. Oliver J. Fay, of Des Moines, Chairman of the Board of Trustees of the State Society.

Dr. Olin West, Secretary of the American Medical Association, will be present as a guest of the society and will take part in the discussion. Confident that this meeting will be of interest to many other members of the State Society, particularly the officers of other county societies who may later discuss the problem, the president of the Polk County Society has extended to all members of the State Society a cordial invitation to attend and participate in this meeting which will be held in Des Moines,

Fort Des Moines Hotel on Tuesday, January 31st, at 7:30 P. M.

THE MAJORITY REPORT

Aware of the inequality in the quality and extent of medical care accorded the various strata of the American population, a committee of fifty members was unofficially organized five years ago to conduct an extensive fact-finding research into the costs of medical care, and the problems of rendering to all persons rich and poor alike an adequate medical service. This committee on the culmination of its work, and as a result of an expenditure of a million dollars, produced a final report which was released to the public about one month ago. (Epitomized in last month's Journal.)

This report has attracted widespread and thoughtful attention throughout the nation, both of the medical fraternity and of the laity. The problems discussed and the recommendations offered are of such fundamental and far-reaching importance that every member of the medical profession should closely study the report since from it may come a new order of socialized medical practice unless active and intelligent steps are taken to forestall such a plan by the adoption of a rational and effective program within the medical profession itself. It is not enough to descry the majority report of this committee as being conducive to a medical hierarchy, which may dictate to or eliminate private practice. Private practitioners of medicine must show a more workable plan. They must demonstrate that communal medical interests can best be served by a plan which restores the general practitioner to the central place in medical practice.

RECOMMENDATIONS OF THE COMMITTEE

I

The Committee recommends that medical service, both preventive and therapeutic, should be furnished largely by organized groups of physicians, dentists, nurses, pharmacists, and other associated personnel. Such groups should be organized, preferably around a hospital, for rendering complete home, office, and hospital care. The form of organization should encourage the maintenance of high standards and the development or preservation of a personal relation between patient and physician.

II

The Committee recommends the extension of all basic public health services—whether provided by governmental or non-governmental agencies—so that they will be available to the entire population according to its needs. This extension requires primarily increased financial support for official health departments and full-time trained health officers and members of their staffs whose tenure is dependent only upon professional and administrative competence.

III

The Committee recommends that the costs of medical care be placed on a group payment basis, through the use of insurance, through the use of taxation, or through the use of both these methods. This is not meant to preclude the continuation of medical service provided, on an individual fee basis for those who prefer the present method. Cash benefits, i. e., compensation for wage-loss due to illness, if and when provided, should be separate and distinct from medical services.

IV

The Committee recommends that the study, evaluation, and coordination of medical service be considered important functions for every state and local community, that agencies be formed to exercise these functions, and that the coordination of rural with urban services receive special attention.

V

The Committee makes the following recommendations in the field of professional education: (A) That the training of physicians give increasing emphasis to the teaching of health and the prevention of disease; that more effective efforts be made to provide trained health officers; that the social aspects of medical practice be given greater attention; that specialties be restricted to those specially qualified; and that postgraduate educational opportunities be increased; (B) that dental students be given a broader educational background; (C) that pharmaceutical education place more stress on the pharmacist's responsibilities and opportunities for public service; D) that nursing education be thoroughly remoulded to provide well educated and well qualified registered nurses; (E) that less thoroughly trained but competent nursing aides and attendants be provided; (F) that adequate training for nurse-midwives be provided; and (G) that opportunities be offered for the systematic training of hospital and clinic administrators.

The increasing accuracy and complexity of medical science, the rapid and extensive growth of specialism, the ever-increasing activities of a fraternalistic government in the management and control of medical problems, the mushroom-like growth of medical clinics, the dependency of the profession upon hospitals, and the ineffectiveness and lack of efficiency of many general practitioners are held foremost as causes of the modern problems of medical care with which the profession and the public at large are concerned. The committee recommends that medical service, both preventive and therapeutic, should be furnished largely "by organized groups of physicians, dentists, nurses, pharmacists, and other associated personnel." Such groups should be organized principally around a hospital for rendering complete home, office and hospital care. The form of the organization should encourage the maintenance of high standards and the development or preservation of a personal relationship between physicians and patients. This organization is not inimicable to public welfare, nor to the welfare of the physicians concerned.

So far the recommendations of the committee do not differ materially from those of organized medicine as represented by the report of the mi-

nority group. Passing, however, to Section III we find that the committee recommends that "the cost of medical care be placed on a group payment basis, through the use of insurance, through the use of taxation, or through the use of both of these methods." While the committee states: "This is not meant to preclude the continuation of medical service provided on an individual fee basis for those who prefer this method," the system essentially destroys private practice.

If we would avoid a program of blundering experimentation and erroneous procedures which are always costly in dollars and lives, it behooves us to study the experiences of others. Forms of group practice on a group payment basis have been employed by several European nations for many years. Extensive surveys of their experiences are available, and if one would thoroughly understand the operations of such a program, these reports should be carefully and thoughtfully studied. No scheme of compulsory medical insurance for wage earners has heretofore provided sufficient funds to give all the medical aid which the sick needed without much assistance from the state. Throughout Europe, to insure adequate hospital provisions, aid from the products of taxation over and above the insurance funds secured by contributions made by the employed and the employer have consistently been needed. It appears obvious, therefore, if we are to contemplate the program outlined by the committee, we must recognize the necessity of creating some subsidy from general taxation or exaction if the necessary medical care is to be rendered.

We are asked, then, to accept a plan which, to be successful financially, must exact from all or nearly all of the population weekly or monthly payments toward the creation of a health fund. This fund must be augmented by generous contributions made by the employers of working people and still further increased by taxation of all citizens and a certain amount taken from the general tax fund. Since federal funds will be employed, government control and regulation will be demanded. In other words, the government will take over the function of providing medical care to all persons. This is state medicine.

This portion of the majority report cannot be accepted by the medical profession since we do not believe that it is conducive to public welfare. We are willing to believe that group practice in moderation may be conducive to general good, but we are not willing to accept group payment as a corollary. "There is the question of the right of the American citizen to pick his own doctor and his own hospital, to pay his own bills with his own money, to be responsible to a doctor who is responsible to him." There is virtue and virility in the relationship of the general practitioner to the individual patient, a relationship which demands an individual protection on the one part and an individual payment on the other.

In further contemplation of this program of the committee, one reads with considerable amusement, "this is not meant to preclude the continuation of medical service provided on an individual fee basis for those who prefer the method." Imagine, if you can, the operation of a plan, one which demands support through the use of insurance, through the use of taxation, or through the use of both of these methods, which permits of a plan of private or individual professional service. Remove from the practitioner's clientele that great middle class of individuals who are recognized as the common people, the wage earners; eliminate economically the great indigent class; there remains only that smaller group recognized as the independently wealthy, who could consider the continuation of the individual fee basis in medical care. If the program of the committee is economically sound and could supply an adequate medical care at a cost below that now demanded, would not such a plan of service be equally attractive to that class of individually wealthy persons capable of supporting a physician in private practice? Does not the plan by its own definition eliminate all practice other than that sponsored by the State? Take away the bottom crust—the indigent; then remove all the fruit—the great middle class; and finally remove the succulent top crust—the wealthy, and where is the pie?

Humanity has not yet learned to use communal privileges with due regard to communal economy, and it is on this principle we state our belief that the plan presented by the committee is unsound both in theory and in practice.

Eliminate from our consideration those factors of private practice which stimulate the physician to render his best and utmost service—factors which it is contended would be lost in group practice; forget if we can the evils which burden a scientific or professional service managed under a political scheme; ignore if we will the unfair exploitation of the medical profession. Nevertheless, we still remain profoundly convinced that any plan conducive to the public welfare, and through that, to each member of the community, is the best plan for the physician, and also in the highest interests of the entire community in which both patients and doctors are a unit.

Dr. William Allen Pusey, addressing the Board of Trustees of the American Medical Association,

states, "Experience has shown that the vast majority of disease conditions afflicting man can be most satisfactorily and economically diagnosed and treated by competent, individual, general practitioners." Nowhere in all of the extensive data collected by the Committee appear figures to disprove this fact. If the vast majority of disease conditions can be best treated by the general practitioner, it seems futile to contemplate elaborate and expensive machinery involving many highly salaried lay directors to bring this service to patrons. One cannot fail to question the motive activating this elaborate plan, especially when one considers that the plan would create executive positions most satisfactorily filled by lay individuals such as those constituting a portion of the investigating committee.

After all is said, one cannot help questioning the useful end accomplished by this elaborate investigation of modern medical practice. Who has created this tempest of dissension? From a study of the current newspaper discussion, from contact with representative individuals in all walks of life and in many diverse occupations, and from an intimate and personal contact and knowledge of the effectiveness of modern practice, one is lead to believe that the vast majority of our local population is, at this time, better satisfied in the relations with their doctors than in their relations with their grocers, their coal dealers, their clothiers, their preachers, their landlords, or the teachers of their children.

In due justice to any plan of socializing, standardizing, and placing under governmental control those agencies causing greatest economic stress today, it would seem that reform should begin in these groups rather than singling out and meddling with a community service which is at present operating with comparative efficiency and satisfaction. Through the long chronicles of medical history, one fails to find an instance where the medical profession required extra-professional coercion to adjust its services to the needs of the time. If the need for a new order of practice is at hand, we sincerely believe that the profession can, and will, meet that need and will do so without costly overhead or burdensome managership.

Space will not permit a more extensive analysis of the proposals of the committee in so far as group practice and group payment is concerned. To maintain level judgment in the consideration of this problem, one needs only to bear in mind the costliness and futility of the proposed plan as demonstrated by our European neighbors, the inevitable destruction of individual and intimate contact between patient and doctor, which is, after all, the essence of medical practice, and to observe the abuses which inevitably creep into public services operated under a system of political patronage.

The discussion of the recommendations so far has been limited to paragraphs one and three of the final report, and these recommendations are the essence of the report. Sections two and four offer only a concept of a broader public health service, and reflect perhaps the objectives of that large group of public health officials included in the personnel of the committee. Paragraph five dealing with the recommendations of the committee in the field of professional education is a masterpiece in generalities. No concrete recommendations are made, the committee, perhaps wisely, making use of such elusive expressions as "increasing emphasis on broader educational background," "more stress on responsibilities and opportunities," "systematic training," etc. One can neither challenge nor subscribe to this section of the recommendation except as one wishes to vitalize these broad generalizations with his own concepts.

Summarizing, then, the recommendations of the committee, they are:

1. State medicine, group practice with group payment.
2. An extension of public health service.
3. An extension of professional training.

As one reviews these recommendations it appears that equally valuable conclusions might have been drawn from a less extensive and expensive investigation. No million dollar idea has been advanced. One should not, however, conclude that the efforts of the committee have been entirely in vain. Reference to the twenty-six printed publications of the committee reveals the broad scope of their work and the mass of data collected. The shortcomings of the committee do not seem to lie in the nature or extent of their investigation, but rather in their failure to properly evaluate their findings in terms of communal need and welfare. It is apparent that socialization of medical practice is not the solution of the problem "of rendering to rich and poor alike adequate medical care at a cost which they can pay."

THE COST OF BEING SICK

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The economic phase of the cost of being sick is a problem that has been brought, not only to those who have contracted illnesses but, through various lay periodicals, to the mind of the general public. There is no doubt that a serious illness today oftentimes upsets the contemplated ratio between income and expenditures more than in former times. The great majority of people have no direct concern with the misfortunes of life, but sooner or later everyone meets with the problem of disease. Assuming that the question is an economic problem, any remedial proposition must consider causes and effects, and the position of each factor combined with others that complete the picture. Statistical quotations and the conclusions drawn therefrom depend upon the accuracy of the statistics quoted, and it has been the author's endeavor to make use only of those that bear verification.

Let us first consider the annual outlay by the public for the cost of being ill. According to Dublin and Folk, the following figures represent the annual expenditure in the United States:

Physicians in private practice	$ 625,000,000	22.8%
Hospitals and clinics	$ 855,000,000	30.0%
Maintenance—605,000,000—21%		
Capital Exp.—250,000,000— 9%		
Dentists	228,000,000	8.0%
Trained Nurses	146,000,000	5.0%
Practical Nurses	66,000,000	2.0%
Midwives	6,000,000	0.2%
Non-medical practitioners, healers and quacks	125,000,000	4.0%
Drugs, medicines, and appliances	700,000,000	25.0%
Preventive work	90,000,000	3.0%
Total	$2,841,000,000	100%

This does not include loss of income during illness and loss from future earnings due to premature death and diminished efficiency. If these amounts are included the total would be twelve billion dollars. About $800,000,000 of the $2,841,000,000 come from federal, state and local taxes, leaving about two billion dollars that annually come from the pockets of individuals.

To obtain some idea of comparative expenditures, W. C. Rappleye gives the following figures as to totals and the average per family:

Non-governmental medical services		Per Family
Patent medicines and drugs	$ 700,000	$ 25.00
Physicians	650,000	24.00
Hospitals (non-governmental)	380.000	15.00
Nurses	200,000	8.00
Dentists	150,000	6.00
Irregulars	50,000	2.00
Non-medical		
Passenger autos	4,000,000	150.00
Tobacco	1,800,000	67.00
Candy	1,000,000	37.00
Gasoline (non-commercial)	1,000,000	37.00
Theatres, movies and other entertainment	930,000	35.00
Soft drinks, gum, ice cream	910,000	34.00
Jewelry and furs	780,000	29.00
Radios and musical instruments	440,000	16.00
Sporting goods, toys, games	430,000	16.00
Perfumes, cosmetics, toilet soap	410,000	15.00

Three billions are spent each year in maintaining prisons, police courts, district attorneys and sheriffs; in other words, this represents the direct cost of crime and its prevention. One and one-half billions are expended in advertising. Three billions represent the value of goods stolen annually. In ten years twelve billion dollars' worth of autos have been scrapped. The public buys what it is taught to buy.

The expenditure for candies and tobacco equals the cost of disease. Living expenses (not considering the present depression) have increased 76 per cent since 1913. National governmental expenses in 1900 were $520,000,000; in 1931 they were $4,120,000,000; an increase of 800 per cent with a 75 per cent increase in population.

Let us first consider the question from the standpoint of the medical profession. There has been greater progress in scientific medical knowledge in the last fifty years than in the previous five centuries. This remarkable growth in knowledge has brought about changes in practicing the healing art with which the economics of medicine have not kept pace. Quoting Secretary Wilbur, "The saddle-bag age of medicine has passed, but saddle-bag thinking on the part of the profession and public is still with us."

What has been the result to the populace of this progress? Quoting from the vital statistics of the state of Massachusetts, which are the most authoritative of any state: "Your average expectancy of life as a contemporary of George Washington in 1789 would have been thirty-five years. In one hundred years, that is in 1889, it had advanced eight years, or to forty-three years; in 1900 to forty-nine, in 1910 to fifty-one, in 1920 to fifty-five and in 1930 to sixty-one years; a remarkable tribute to medical science.

The brightest chapter in medicine has been since the time of Louis Pasteur. Yellow fever has been eradicated, smallpox, diphtheria, typhoid fever and tetanus are absolutely preventable. Eighteen years ago there were annually 23.5 deaths per 100,000 from typhoid; now the rate is 5.5.

Twenty-five years ago 200 out of every 100,000 annually died from tuberculosis, now but 86. Quoting Irving Fisher, about twenty years ago, 40 per cent of our mortality was preventable or postponable, and with a reasonable application of scientific medicine the average expectancy could be increased fifteen years. At the present time probably 50 per cent of the mortality is preventable or postponable.

Fifty years ago three out of four patients with diphtheria died. Fifty years ago a case of appendicitis usually meant a smaller immediate expenditure for medical care; just a few visits from the family doctor and then the funeral expenses.

Think what insulin means to the diabetic patient; liver extract to the perniciously anemic. Would anyone, no matter what the cost, go back to the days of cholera and yellow fever? Would anyone wish to discard antitoxin and the x-ray? Preventive medicine and scientific diagnosis are largely responsible for our decreased mortality.

There is no reason to exhibit a maudlin sentimentality toward the family physician of fifty years ago. Give him due credit for what he was, a faithful attendant from the time of our entrance into the world to our exit. He learned to know the family skeletons in our closets, he was a practical psychologist, he took advantage of the five senses with which nature endowed him. He applied his knowledge with a keenness and a judgment that many a physician of today could well emulate. He was friend, confessor and advisor. He knew his people; his charges, as measured by present standards, were small. Remuneration was sort of an honorarium. He prospered fairly well in his community; he was an outstanding figure. For a pain which you described he gave you a prescription, which the town apothecary sometimes could not decipher, and all for a dollar. He was revered, and properly so. With the tools such as he had he served his people and served them well. To prepare himself to serve his community he spent part of two years at a medical school at a cost of five or six hundred dollars. His equipment meant an expenditure of from two to four hundred dollars—a few instruments, a few books, a team of horses and an office overhead of a mere pittance.

The young man of today entering the profession of medicine, after completing his common and high school education, must have at least two years of college pre-medical work, then four years of medical instruction, then at least one year as an interne. This is a minimum of seven years, and more often eight or nine. This means an investment of from twelve to thirty thousand dollars in addition to the time spent in acquiring his education. His equipment and overhead, to adequately serve his clientele, is no longer a small item. To assume a position that will command the respect of his patients, his gross income, after deducting expenses and depreciation of equipment, is such that his net profit is not, as many are inclined to think, nearly equal to the fee paid. The average overhead is at least 40 to 60 per cent of his gross income.

There are about 140,000 physicians in active practice in this country, with an average gross income of $4,500.00 and the fees they receive annually approximate $625,000,000, or about 23 per cent of the cost of being ill. The peak of a physician's income averages between the fifteenth and nineteenth years of practice. He is his own invested capital. As his earning power varies, so does his capital, and if through misfortune, illness or old age, his earning power is reduced to a pittance, his capital structure has been lost.

The physician has his individual economic problem. The success of the physician has always been his own individuality. His patients have recognized this factor, and he in turn has become successful as he has served his clientele as individuals. The great weakness of increased organization in caring for disease involves the standardization of the doctor and patient. Quoting Willard C. Rappleye "Any plan that lessens the responsibility of the physician or denies him the rewards of individual effort and superior ability, will in the long run be detrimental to public welfare."

The physician is an individualist. He desires to remain as such. He has contributed to the scientific advances in medicine; he has given his time to educating younger men in the profession; he has increased the standards of practice as a protection to the public; he has recognized the values of preventive medicine as they have been made applicable through scientific discoveries. Successful preventive medicine means a reduced clientele and income, yet this has never been considered by the physician. The physician has attempted to keep abreast with the scientific advances of his profession but has not recognized sufficiently that these same scientific advances have brought about economic changes.

Better physicians cost more and are worth more; they cost more to make and more to keep. "Fifty years ago the housewife was satisfied with a twenty-five cent broom; thirty years ago she demanded a four-dollar carpet sweeper, and today she is not happy unless she has a seventy-five dollar vacuum cleaner. The well equipped physician of today may be compared to the electrically operated vacuum cleaner, which the public not only desires but demands." What has been the

effect of such public demand upon the medical profession? There is a lack of a true perspective on the part of the public. Only a small percentage of our citizens have an understanding of scientific medicine, a large percentage are ignorant of health laws and still view the art and practice of medicine with a certain degree of mysticism. This lack of true perspective has led to a lack of appreciation of the general practitioner, an economic lack of appreciation has followed and is expressed by the physicians themselves in their modes of practice. The general practitioner has always been, and should remain, the bulwark of the profession. The development of so many physicians in the so-called special fields is largely due to the economic response by the public to this type of service.

Quoting Morris Fishbein, there are in the country today about 160,000 physicians. In 1925 there were 15,000; in 1928, 19,000 and today 40,000 so-called specialists in the profession. In 1915, 30 per cent of the medical graduates became specialists; in 1920, 51 per cent and today 75 per cent of the medical students choose a speciality before the end of their senior year.

Eighty to ninety per cent of the diseases with which people are affected can be diagnosed and adequately treated by a good general practitioner and with handbag equipment. In a survey made in a New England community, 90 per cent of the disease incidence was seen and treated by the general practitioner; 55 per cent being seen in the home, 35 per cent in his office, and 10 per cent in hospitals.

Regarding the services rendered by the physician, 75 per cent of office visits are for minor surgery, upper respiratory infections and venereal diseases. Ninety per cent of home visits are for infections of the upper respiratory tract, general medical and contagious diseases, obstetrics and minor surgery. Ninety per cent are illnesses that cannot be controlled on a community basis but are individual problems. Less than 10 per cent are diseases against which public health efforts are mainly directed. This is an index of the efficiency of our past and present public efforts.

The individual history of the patient is of importance. The old family doctor had these facts as no one else could get them. He was in a better position than anyone else to administer personal preventive measures. The "segmental scrutiny" of the patient in a large clinic is here placed at a particular disadvantage. It is true that mechanical inventions and electricity have enabled medicine to become more truly a science. Too great a dependence on these accessories with any lessening of the appreciation of common sense as applied by a physician in his knowledge gained through his five senses is to the patient's actual and economic disadvantage.

The physician defeats his purpose if, to preserve his individuality, he stands aloof. There must be developed a consciousness on his part of the necessity for cooperating; cooperating without subordinating his own position. The hospital and the research laboratory he has today, but it must be remembered that without him they would all stand simply as empty buildings. There are phases of public health and preventive medicine that are truly community, state or national problems. They can best function as such, but when it comes to the care of the individual sick, it is his duty not to insist simply that it remain his individual problem, but to recognize the economic change and bring forth constructive suggestions that will best meet with conditions as they exist. The servant is worthy of his hire, but his service must be better than any other offered upon the market.

Public health measures find many people quite cold to the procedures they necessitate; likewise there are many physicians, perhaps extreme individualists, who are equally unsympathetic. In contrast we find certain lay minds that are extreme in their views as to the advantages of highly organized medical practice. Furthermore public health work has developed a certain group of medical men who are mass-minded, rather than patient-minded. The accomplishments of public health measures as made in mass, have been great. In fact we have the knowledge and means for overcoming those conditions that are best combated by mass action. This has been accomplished without entirely socializing the medical profession. The scourges that confront us today are not caused by contaminated water supplies or infections and transmissible diseases, in other words, community problems. Degenerative heart disease, arteriosclerosis, nervous instability, the prevention of venereal disease, infections of the upper respiratory tract and the control of cancer stand out most prominently as the problems of ill health. Programs of education of the laity as regards these conditions are of inestimable value, but the results as to prevention and treatment are largely a matter of individual hygiene or the attitude of the patient toward his individual physician.

The general practitioner, as his contribution to the changed economics of medicine, must enlist his services more in the preventive phase of medicine. It must become a part of his practice, because once he recognizes the fact, his position is the most advantageous one from which medical

science can combat our most pressing problems of ill health.

The nursing problem is one that is becoming acute in this country, more acute from the nurse's standpoint than from the patient's. In 1890, 400 nurses were graduated from available nurses' training schools, but in 1930 over 20,000 received diplomas after three years preparatory service. If conditions continue along the present lines of education and training, 65,000 will be graduated each year by 1950. To the patient a seven- to eight-dollar per diem charge may seem exhorbitant. To some it is an economic impossibility, and when two shifts of nurses are prescribed, the number of patients who are unable to meet the financial demands becomes enormously increased. At present, however, we are considering the problem economically from the nurse's position.

Forty years ago nurses received $15.00 a week, now they receive $50.00. Forty years ago carpenters received 12½ cents an hour, now they receive $1.00 to $1.25 an hour and other trades in proportion. The average nurse at $50.00 per week receives annually no more than $1,500.00, due to loss of working time. This is not an exhorbitant remuneration for three hard years of preparation. The most serious problem, however, is the overcrowding of her profession. Smaller hospitals have thought they were operating with a reduced expense by maintaining a training school. In addition they thought they gave their institutions an added position because they served in a teaching capacity. Increased standards of nurses' training schools have added materially to the expense of operating the educational department. Such hospitals can operate with graduate nursing service on an equal economic basis and the training school in smaller hospitals will have to go.

Hourly nursing service is a phase of the problem that has not been sufficiently emphasized by nurses as an organization. Public health or visiting nurses' organizations which depend on public philanthropy for their support, should not offer hourly service even to those in the community who can afford to pay for it, when such service is offered by the nurses in private practice. This field has been neglected by the nursing associations as an aid to fill in the idle time of nurses.

The interest of the Julius Rosenwald Fund has been aroused as to the need and value of hourly nursing service. The service covers a variety of types of illnesses, such as care of the actually ill, maternity cases, dressings, treatments, as for colonic conditions, care of the chronically ill and the convalescents, the relief of peak loads in hospitals or assistance to a physician in his private practice. The mistake that will be and is being made is to attempt to provide such service in an inadequate way. It is a special type of service that the ordinary hospital trained nurse is not trained to give, nor is the hospital equipped to teach her the requirements for the service. There is a need for such service and if properly organized it can be of economic value to the community and to the registered nurse herself.

It means more than simply telephoning for some nurse to come to a home for an hour or so. To be successful it must be conducted under able leadership with a continuity of service. It must have publicity; it must have certain definite policies. Above all, to meet the approval of the public, it must be given only by nurses who are sufficiently interested in the work to study and prepare themselves through a short intensive course for the needs of this particular type of service. Only in this way can it be of economic value to the public.

In considering the hospitals, there is no general realization of the evolution in hospital facilities. In 1875 there were 661 hospitals in the United States. In 1890 they had increased to about 2,000; by 1909 to 4,000, but by 1930 to over 7,000. The bed capacity is about 950,000. This represents a capital investment of $3,000,000,000. Ninety per cent of this capital has been furnished by governments or non-profit associations supported by the public. Few industrial groups show a greater investment. Hospital capital investment is exceeded by iron and steel and their products, textiles and chemicals and allied products. Government hospitals represent 95 per cent of the investment for the care of mental diseases and 75 per cent of those for tuberculosis. Most of the 400,000 beds for nervous and mental cases are concentrated in 553 state institutions.

Hospitals as a class, are not endowed institutions. Forty per cent of the total endowments are owned by thirty-seven of the larger institutions, sixteen of which are affiliated with medical schools. Seventy per cent of all endowments are in the north and middle Atlantic states. The average hospital investment is about $425,000, with a cost of $5,000.00 per bed. In 1905 hospitals were built at a cost of twenty cents per cubic foot, in 1927 eighty-seven cents. Capital expenditures approximate $200,000,000, principally for replacements and improvements, without increasing bed capacity. The annual operating cost is about $1,500.00 per bed, so $30,000 is the sum necessary to endow a hospital bed.

Fixed charges remain about the same, not rising appreciably with business at capacity, and in New York in 1928, constituted one-fourth of the oper-

ating expenses. It is self-evident that only by using hospital facilities to their maximum, can the capital investment be justified.

Hospitals were first constructed for the poor. It was with difficulty that those more fortunate financially could be persuaded to go to a hospital. The hospitals first added rooms for the wealthy and as a last consideration the middle class was considered. Originally the hospital patient was a selected patient. With the advance in medical science, the hospital has undergone an evolution. The x-ray and clinical laboratory, the department of dietetics, and departmental divisions with special equipment, have added to the cost of hospitalization. Operative expenses in a hospital are affected just as they might be in an hotel. According to the United States Department of Labor, the increase since 1913 (up to the present depression), was as follows:

Commodities	68.4%
Kitchen help	432.0%
Maids	125.0%
Pharmacists	500.0%
Laundry	525.0%
Chefs	225.0%
Raw Foods	58.0%
Fuel	80.0%
Dishes	100.0%
Blankets	63.0%
Cotton	71.0%
Instruments	75.0%

With this there has been an increase in hospital charges of 66 per cent.

Thirty years ago the per diem bed cost was $1.00, now it is $5.00. The hospital charge is no more than an hotel charge, and with a great deal of extra service. The charge has increased, but the increase in total expense to the patient is not as great as many think, for thirty years ago the average stay was twenty-eight days, while it is now about eleven days. The hospital has kept pace with our increased standards of living but its charges have not increased proportionately. Yet the complaint of excessive hospital charges remains a common one. The public cannot return to the hospitals an adequate return on the capital investment.

What are the problems that confront a hospital and what can the hospital do to relieve the situation? Closer cooperation between the physician and hospital is needed in determining the financial ability of the patient to pay. Sincere attempts on the part of both physician and hospital should be made to discourage a patient from obligating himself for a more expensive service than he can afford. Credit extension by installment paying has a limited use, since it favors only a few. Basic rates, including everything, with a flat rate for extra services, (laboratory, etc.) are a help. Some hospitals are contemplating the consideration of their charge and the physician's together, that is, the entire financial outlay for the patient would be considered as an economic unit.

Lack of differentiation between classes of patients as to extra charges is a disadvantage to a patient of moderate means. The physical structure of hospitals must undergo a radical change. There has been a disproportion in the available types of services offered. Large wards and private rooms have predominated. The smaller ward and cubicle, with a single room as an adjunct for temporarily housing the critically ill, is being given more consideration. There should be greater accessibility of hospital facilities for the middle class and this can be accomplished partly by sincerely trying to break down the old distinction between ward and private room patient. The patient of moderate means does not patronize the most expensive hotels and restaurants when away from home, and he should be discouraged from pampering himself during hospitalization. Special nursing service for those in modern circumstances should be discouraged except when actually necessary. Hospitals should not accept compensation, insurance or government cases below their per diem cost of services rendered. The Chicago Medical Society has adopted as one of its principles, that all hospitals shall observe this rule. Hospitals should not be constructed as institutions of magnificence, but should be built for service. Laymen in charge of the building and operating of a hospital are often without the close advice of the medical staff. They find themselves without a true appreciation of the hospital needs and without a real analysis of the community needs for what the hospital has to offer. M. L. Harris states that if a hospital is not self-sustaining it is misplaced in the community. Hospital charges, considering increased standards of living, are not exhorbitant when viewed from the standpoint of operating costs (capital costs being excluded), but the hospital does have a responsibility in trying to meet changing economic conditions with efficiency and with a minimum overhead.

Consideration of the position of the patient is the fourth and paramount factor to be considered in the cost of being ill. Regardless of the statements of some secretaries and salaried personnel of foundations and social service organizations, physicians as a profession can point with pride to the fact that they have always in the past, and will continue in the future to hold the welfare of the patient above all other considerations.

What are the abilities of the patient to pay when ill? According to the Medical Bureau of Economic Research, the following represents the incomes of our populace:

Family incomes over	$5000—	less than	2%	—less than	1,000,000
" "	$3000- 5000—	" "	5%	—approx.	2,000,000
" "	2000- 3000—	" "	14%	— "	6,000,000
" "	1500- 2000—	" "	35%	— "	18,000,000
" "	1000- 1500—	" "	30%	— "	13,000,000
" "	Less than 1000—	" "	14%	— "	6,000,000

Such a disproportion of income makes it self-evident that illness, to which all are subject, necessitates the recognition that there must be a variation in the cost of illness according to the ability to pay. The statistics of W. C. Rappleye, as previously given, plainly show a disproportion between the expenditures for so-called luxuries and the cost of being sick, which is classed as a necessity. Simply to complain that "ninety-eight per cent of our population who are having a difficult time meeting their illness expenses are the very ones who are crowding our highways with autos, filling the places of amusement, and buying the bulk of luxuries," does not offer a solution to the problem.

What are the average annual expenses that the family pays for being ill? According to a United States Government survey of seventeen thousand city and farm families in 1918 and subsequently, the average of such expenditures was between sixty and seventy dollars. The average, however, does not portray the real picture. Among 2,046 families in six large cities, 36 families paid each an average of $520.00, a total of $9,000.00; at the other end in the group, 564 families paid a total of only $620.00, less than two dollars each, and there were many that reported no illness cost. Fifty-five per cent of the total expense fell to 23 per cent of the group.

The patient can estimate the food needs and even the luxuries for the family. The great middle class can assume the expense of minor illnesses. The problem does not lie so much in the size of a given illness bill, but rather in the unexpectedness and the unevenness with which it presents itself. Thus sickness cannot be budgeted on the basis of average annual expenses. The unevenness of large bills may not only be crushing, but become tragic in causing true financial disaster. The wage earner's problem is even more acute, since he may need financial protection against wage loss as well as funds for medical care. The psychologic effect upon one who is ill, of knowing that his family may be in actual want, is a factor that may prolong his sickness, and even prevent recovery.

The problem that faces the great middle class is the sudden unexpectedness of major illnesses and their attendant costs. The minor illnesses are not a real economic problem. Partial coverage for physician, nurses and hospital bills in the form of insurance does offer the opportunity to budget major illness expense. Partial coverage with no attendant cash benefits, prevents malingering. Partial coverage greatly reduces premiums. The great obstacle lies in selling the insurance. Life insurance companies with more than a century of experience, with trained personnel, with every form of sales argument, insuring against an eventual certainty—death—have only been able to insure one-eighth of the population. However, against the argument that health insurance can only be sold to a small fraction of the population, and will offer no solution, there is this thought to be considered: insuring for life is an unselfish act by which the insurer basically hopes that someone else will benefit. Health insurance is basically a selfish act since the insured hopes to be benefitted. It would perhaps be better to compare the probabilities of establishing general voluntary partial coverage health insurance to those of selling fire insurance. The proper efforts have not been made to place this form of protection before the people, and the author would not attempt to make a positive assertion that it can be accomplished.

Compulsory governmental control insurance means adding to our governmental bureaus and increasing paternalism.

Socialized medicine means at least a 25 per cent increase in governmental expense. Our national, state and local governments are now collecting $116.00 per annum per individual, and if all the population took advantage of such a system as has been demonstrated in the Veterans Bureau, no one could prophesy to what heights the expense might soar.

The attitude of the average individual toward hospitalization needs enlightenment. The average individual buys the type of clothing that fits his "pocketbook." If he travels he does not patronize the most expensive hostelry unless he feels he can afford it. However, when illness and hospitalization confront him or his family, partly through a desire to do everything possible and partly through ignorance, the thought of expense is for the time being cast aside. Family love leads to needless expense. False pride is a factor of no mean importance. Unnecessary special nursing is partly the fault of individual pampering and partly lack of suggestions from the doctor and hospital.

To summarize, the cost of medical care is not excessive when considered in the light of increased cost and standards of living. It is far below the increased cost of government. Diagnosis, due to the advance in medical science, is necessarily more expensive than formerly. The physician's re-

muneration is not excessive, considering the increased cost of medical education, the fact that he himself is his entire invested capital, and that when his earning power diminishes or ceases his entire capital proportionately diminishes or is entirely lost.

Hospitals, with the advance in medical science, have become more than nursing homes. As diagnostic centers and with more expensive but better therapeutic measures available, with operating costs increasing with increased wage and living costs, hospital charges are not out of proportion. Cost reduction in hospitalization would not essentially alter the problem. More careful studies of hospitalization needs in a community are factors that must be kept in mind. Only 10 per cent of those who are ill require hospitalization. Many patients are hospitalized who do not really require such service. It is true that under modern living conditions, with the apartment dweller often calling an in-a-door bed and a kitchenette his home, many patients must of necessity be hospitalized for illnesses who under other conditions would be cared for at home.

What allowance should a family be expected to make for the cost of being ill? Statisticians do not wilfully distort the facts, but working with varying data, fail to deduct the same results. The Metropolitan Life Insurance Company made a survey of the cost of illness in 3,281 families including 17,129 individuals for a six months' period of time. Six per cent had no illness, 60 per cent spent less than $50.00 per family, 20 per cent spent 64 per cent of the entire amount, and 1 per cent spent $500.00. The average on an annual basis was $141.00 per family or $27.50 per individual.

Olin West estimates $90.00 annually for a family of five. Biggers, in the Dominion of Canada, arrives at $150.00 for a similar family. The United States Bureau of Labor statistics give $60.00 as the average amount paid by 12,096 families. Ogden figures that a family budget of $2,104.00 allows $80.00 for medical and dental services. Approximately 20 per cent are too poor to pay for any medical services.

As an example of medical costs in an industrial community, the Medical Service as instituted by the Endicott-Johnson Corporation is one of the most prominent in the country. This service is complete, including medical, dental and nursing care, hospitalization, social service, prenatal and pre-school guidance. It covers about 15,000 workers and their families, totaling about 60,000 people. In 1928 there was expended about $900,000 or $21.81 per individual. The personnel employed included twenty-eight physicians, four dentists, sixty-seven trained nurses and thirty-two technical and professional assistants. Of the physicians, none received less than $3,000.00 and none more than $12,000 per annum. The house calls made numbered 87,400 and the office calls 118,740. As far as practictable the service was flexible in permitting the patients to select their own physicians. Physicians without the salaried personnel were employed on a fee basis to about 22 per cent of the total physicians cost. Approximately $200,000 was the total physicians cost, or $5.69 per capita. However, only 77 per cent of the employees and their families used the service, and 90 per cent used the service in part. This brought the actual per capita cost of those using the service to $25.49.

It was found that in those using the service, 19 per cent had illnesses of a minor nature and called no physician; in those not using the service, 37 per cent. When illnesses developed those using the service called for the physician's service within three days in 76 per cent of the cases, in those not using the service in 68 per cent, but the duration of illness was about the same.

A comparison of the services rendered to the community by the corporation with the medical service in surrounding communities was made by a committee from the American Medical Association. The results were in brief as follows: The obstetrical care was equally good, the opportunities for prenatal care were exceptional but the results disappointing. Nursing and medical service was exceptionally good. Actual treatment was about the same, and surgery was equal or slightly better. Hospital care was above the average. In other words, this highly organized service has not shown conspicuous advances over service rendered without the organization, and the cost was not essentially less than that to outside families.

The practice of group medicine or so-called clinics in the most successful instances are built around one or two personalities. Well managed they give good service, poorly managed they are expensive failures. They possess certain advantages, such as examination in one place with an easier correlation of findings, but they are prone to subject their clientele to unnecessary examination and do not materially reduce the cost of medical care nor in any way economically solve the problem.

Contract and lodge practice are subject to criticism. In the former the responsibility is to the employer rather than to the patient, and when service is offered, as often in the latter, at a ridiculously low outlay, it is not of the best type.

Twenty-five nations are experimenting with so-called panel systems, socialized, communistic or state medicine. The writer contends, with ample

support, that such institutions mean a standardization of medical service, with a lamentable mediocrity of the same.

It has been suggested that the medical profession as a group organize and operate the part-pay clinic. This lends itself to the same standardization and curtailing of individual ambition, and denial of the rewards of individual effort. University clinics with a salaried personnel, in which the institution collects and retains all fees, medical, surgical and hospital, without consideration as to the financial status of the individual patient, constitute unfair medical practice. Some such institutions are endowed and these endowments enable them to offer a service at less than its real economic worth. Necessities given to society generally on such a basis, through endowments or paternalism, will eventually shatter its very foundations. The part-pay clinic in addition segregates within the public eye certain individuals who have failed to the extent that they are considered worthy of paternalistic aid. The independence of the American citizen has been one of our proudest boasts, and anything socialistic or paternalistic that lowers the individual's pride and exposes it to the gaze of his fellow men, just so much lowers his standard of citizenship.

Public health institutes, organized and operated by laymen, designed primarily to provide educational, diagnostic and therapeutic protection against social diseases, have not been able to resist the temptation to misrepresent their position through public advertising. Once the attention of the public was attracted to them, profits were augmented by high pressure salesmanship.

The Cornell Clinic in New York City offers a service to the great middle class. This clinic, however, does not have any light, heat, or rental expense. The attending staff's remuneration, on a full-time basis, would equal salaries varying from six to ten thousand dollars. Among 20,000 patients, 265 were rejected because they were not entitled to reduced charges, and 3,129 because they were entitled to charity service. One annual report shows 130,000 visits among 21,000 patients, charges for visits varying from $1.60 to $5.00, with an average of $2.39. Such service may justify itself in New York City, but with charges as reported, the writer contends that the medical profession can offer practically as economical a service and yet retain the individuality of the physician.

Frederick Collins, in the *Ladies Home Journal*, says the nearest we have to a workable idea as regards hospitalization is the Baker Memorial Pavilion of the Massachusetts General Hospital, with the following charges:

One bed in a nine-bed ward	$4.00
One bed in a four-bed ward	4.50
One bed in a two-bed ward	5.50
Single rooms	6.50

Mr. Collins is misinformed, for hospitals over the country are offering independent service at even less than that offered in the Baker Pavilion, and it in no way offers an economic solution.

E. A. Filene, founder of the Twentieth Century Fund, proposed a plan for medical guilds with group practice, periodic examinations and health insurance, and professional services at fixed charges. E. Clark, an employee of this fund, in an article in the *Atlantic Monthly* opposes variations in charges to the wealthy and poor. Strange that it does not occur to such lay writers that there is a parallelism in other lines of endeavor where the question is not raised. Would one question an attorney's right to charge more for making a will for a millionaire than for one who possesses $10,000? Clark and Collins, writing in the *Ladies Home Journal*, and supported by Loring A. Shuler, conclude that simply a horizontal scale of prices, the lowering of prices, or state medicine, will not solve the problem.

In Saskatchewan, Canada, a community found itself without a physician and partially solved its problem by hiring a physician for $4,500.00 a year. This was based on $10.00 for each half section and represented a per capita cost of $3.33. This service, however, did not include hospital care, medicine or the services of specialists, so in no way offered a solution.

In Cooperstown, New York, a community of 2,909 people and with 2,000 more within a radius of five miles, an experiment in collective medical service was carried out by nine physicians and a hospital in which all services were collected as a unit. Complete medical and ward bed hospital service were offered for $25.00 per year per individual or $100.00 for a family. While this scheme of insurance seems to have been applicable to this particular community, it offers no solution for a national problem.

The care of the sick is the responsibility of the medical profession. This responsibility includes a dominating voice in the economic problems involved. Criticism without constructive suggestions is useless. Criticism of ideas formulated by lay minds equally is without avail unless something better can be offered. The one outstanding problem is the delivery of adequate scientific medical service to all people at a cost that can be reasonably met by them according to their respective stations in life.

The increased cost of medical education, the

diagnostic aids resulting from scientific advances, the idle time of nurses, the increased cost of hospital operation justify the income received by these respective services. Capital investment in hospitals and research laboratories comes largely through philanthropies or governmental taxation. Yet it is to be remembered that the physician is the indispensable factor in their operation.

The interests of the patient, however, are paramount. His economic ability to pay must be considered, and when the necessary services are beyond his finances, organized effort should be made to relieve his situation. Through ignorance he often does not know how to conserve his resources. Through ignorance he often does not know how to obtain his medical, nursing and hospital service in the most economical way. Through false pride he burdens himself with obligations for services beyond the necessities of his case or his ability to pay. He cannot successfully budget his illness expenses. Universal paternalistic care lowers his self-pride and his standard of citizenship.

The medical profession is opposed to socializing its service to the point where individuality is lost. Mediocrity of service results. Propaganda for the socialization of medicine is constantly being promoted by those in official positions who might expect to profit by the supervising of medical practice. The periodic health examinations as organized by life insurance companies have, as a by-product, produced a wave of enthusiasm for the organization of medical practice. This has been further augmented by commercial organizations formed for the purpose of giving periodic examinations.

Preventive medicine and hygiene have lessened pathologic extrinsic death in the early decades but have not extended the individual limit of life. Without provision for old age, it may be just as well that we have not increased the individual age limit.

Society has responsibilities in medicine and health matters as in other fields. There is a difference between public necessities and private rights. Home privacies should have some protection from invasion by government bureaus. It is not the place of such a bureau to "stand by the bedside of the individual."

Unsound theories, in their attempt to revolutionize medical practice and abolish individual competition, are a menace. Sociologists are not physicians, and often fail to gain an appreciation of the latter's work and responsibilities.

There has as yet been no scheme of state medicine or state insurance that has demonstrated the necessity of absolute governmental control over individual health maintenance. National health insurance is socialistic, not only to the medical profession but to the population. The Congressional act of 1924, as applied to veterans of all wars since 1897, for non-service disabilities, potentially pauperized nearly five million men.

Bureaucracy has a paralyzing influence. Capitalists and philanthropists who are constantly dabbling in medical affairs could do better to devise means and methods to prevent periodic financial depressions and the problem of unemployment of the wage earner. If there is something wrong and legislation is to come, let it not be enacted by fanatics or those unfriendly to scientific medicine.

Let the individual retain his Americanism and do for himself as far as possible. If his medical service is furnished to him as part of his compensation for his labor, then he certainly should retain his right to have a voice in deciding how and by whom that service is to be delivered to him. By legislation we can change human relationships but we cannot change human nature, and when, by state medicine, we approach a disguised dole, we foster "moral gangrene."

In Germany the average worker is obliged to spend about 15 per cent of his wages for insurance. Among the insured illnesses are more frequent and of longer duration. Compulsory insurance to many is not a "sign of cultural progress" but one of "moral decay." The state cannot manage without commanding, and when the state assumes absolute authority in the problems of individual health, the medical profession and the individual are put under the thumbs of the politician, which God forbid.

People must learn to save for their illnesses. Let the sociologist realize that disease is not solely a question of germs, and when he attempts to show the practicability of medical care with all its frills for everyone, let him also provide a system for supplying food, housing, fuel and clothing in abundance for all.

Let us face facts. Refinements in diagnoses, entailing increasing capital investments and the laborer's time, should be available when necessary, and their unnecessary use should be deplored. Utopian ideas do not conform to economic facts. The wealthy may pamper themselves with all the frills if they so desire, but the mass of people should realize their inability to pay for them. Since hospitalization is required for only 10 per cent of those who are ill, the realization of this fact proves that the lack of diagnostic frills will not mean neglect of the masses.

Let communities not be deceived or carried away by the proposals of lay organizers filled with Utopian enthusiasms. Let the community study

its own individual needs. Just because Smithville has provided certain illness services for its citizens is no reason why Jonesburg should adopt the same program.

To discuss and yet offer no constructive suggestions does not accomplish any purpose. Many schemes are being tried. The author feels that the county unit is the place where innovations should be proposed and through which they should be promulgated, and that no plan so far devised is worthy of consideration that does not as a first premise guarantee the individual relationship of patient and doctor. We, in the profession, cannot afford to stand aloof or we will be submerged by the opinions of those outside the profession. We must propose and discuss with this in mind, and the author ventures to make certain proposals that may have more or less merit.

I

There should be closer economic relationship between hospitals and doctors as regards their patients. The basic rates of hospital and doctor can be combined in one expenditure. With knowledge of the patient's financial status, there should be unified effort on the part of doctor and hospital to provide service within the patient's economic need.

II

Nurses training schools in smaller hospitals should be eliminated. Hourly nursing service should be developed. This is a specialized service and nurses should prepare and qualify themselves to render this service efficiently.

III

The medical profession should be organized through its county units into economic bureaus. Such bureaus should establish the financial medical credit of people in the community. They could establish a collection department for doctors, hospitals and nurses. What is more important, the collection service could be carried out on a humanitarian basis because the bureau would have knowledge of the economic status of the patient.

IV

The bureau, through a study of family budgets and the average cost of illnesses with proper allowance for same, would be able to determine the amount the patient could pay. On this basis each family could be rated. If their income justified only one-third, one-half or two-thirds of the regular charge, they would be given a rating card to this effect, good for a limited period of time. Members of the medical profession would accept these ratings and proportionately reduce their regular charges. This rating service could be publicly offered to the community. It would be obtained individually by members of the community and then presented to the physician of their choice. The patients would not be herded with others who, like themselves, were less fortunate perhaps than their neighbors. Their professional and economic relationship with their physician would remain an individual affair. Their self-pride would not be lowered. If their economic situation became better or worse, their rating would change, but it would remain an individual matter. Hospitals would be informed as to the status of patients admitted and the type of service the patient should receive. There would remain a preservation of individuality of patient and doctor. The criticism that has been received personally regarding this plan, has been the difficulty of establishing the real family income, and the complications of the service.

V

Periodic health examinations. Much is written regarding the benefits to be derived from periodic health examinations. The writer ventures the opinion that the advocates of the plan have lost sight of the economic phase of the question, and that in their advocacy they are more or less Utopian dreamers. Complete physical examination with all its diagnostic frills is expensive. It cannot be otherwise and because of the cost, is not generally practicable. No contention is made that it is not a splendid practice to undergo a periodic health examination. However, the number w can afford a periodic health examination is limited. What is lost to view on the part of the patient and also on the part of many physicians, is that the history of the patient from a diagnostic viewpoint is more important than the actual physical examination.

Based on this contention, the writer makes the following suggestion, which in general usefulness would accomplish far more than Utopian plans that only reach a few. The suggestion is that organized medicine, through its county units, establish diagnostic bureaus. Such a bureau would prepare history sheets, much more detailed than an insurance examination sheet. This history would be taken by a clerk. Urinalysis (not microscopic) would be made. The blood pressure of all patients over forty years of age would be taken. This could all be done by a technician. History sheets would then be submitted, by number only, to a committee. Notations would be made on the history as to why the condition of ill health is suspected, with advice to the patient to seek the physician of his own choice. This could be done

with a minimum charge of two dollars, and would be available to the masses. It is a service that could be offered to employers of labor. It would be self-sustaining in its own operation. While it might miss occasionally, its accomplishments would, in the aggregate, be far more than a Utopian plan limited in its application. It is economically sound. The copy of the history taken, and returned by the patient to his physician, would be of immense service to the physician in time saved, and he could make his individual charges proportionately less. The plan does not attempt the practice of medicine; it is an economically organized effort to acquaint the masses with the state of their physical well-being, and leaves to the patient and doctor all of their individual relationships.

VI

The patient's problem. The patient's problem is really the crux of the entire situation. Insurance is the only thing that has been offered that will serve as a means of budgeting illness expense and yet the actual experience of voluntary insurance has not been successful. Partial coverage (benefits only after paying a certain amount) and only for major illnesses would in the author's opinion bring the premiums within reach of the middle classes and even allow a profit to commercial companies. Combined with a system of local rating, if companies could be induced to write such policies, the premiums could be further reduced. The great obstacle that would still remain is, would the people buy it? It is of course self-evident that unless it covered the general public, it would in no way solve the problem.

CONCLUSION

There is no panacea. There is no Utopia. Medicine stands on its record, the patient first, the doctor second. Special trends demand recognition. The practice of medicine cannot ignore them. The personal and individual relationship of patient to doctor has stood the test of centuries, and it is hoped that the present day disciples of Hippocrates will stand as one in preserving that relationship.

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APPENDIX

Since this paper was written the so-called Wilbur Report has been published, approved by a majority and disapproved by a minority. The minority report has the sanction of the American Medical Association. The committee embraced doctors, sociologists and laymen interested in the problem.

The majority report, after stating that the annual cost of sickness is $3,647,000,000, included in which are the services of 177,000 doctors and dentists and some 900,000 others, states that this service to those in the lower income bracket is inadequate. Since over 50 per cent of families have less than $2,000.00 income and since the committee reports that all needed care can be provided in urban regions at a cost, excluding capital charges of $20.00 to $40.00 per capita per annum, the majority report makes specific recommendations.

Reduction of professional incomes, in their opinion, offers no solution. Their recommendation is *first* that medical care be furnished by medical groups, preferably around a hospital; *second*, that basic public service be extended; *third*, that the cost be placed on a group payment basis through insurance, or taxation, or both.

Their study of service through organized groups covered only fifty such groups and deductions as to finances were made from twenty-seven of these. In favoring the distribution of costs to groups and over a period of time, insurance be-

comes an inevitable major recommendation. Regarding lay groups organized for no profit, and accepting taxation, there remains no definite plan as to just what agencies are to be established. "Coordination and control of service" are emphasized without definitely stating how to bring it about. The first minority report states that the community medical center plan has not been proved workable, that it is suggestive of industrial mergers in which mass production and centralized control are the principle features. The minority report objects to establishing a medical hierarchy in each community, it asserts that the service is fundamentally personal, and that the individual and not the disease must first be considered. It asserts that it would be impossible to prevent commercial competition between groups; that the personal relationship between physician and patient would be difficult to maintain; that the committee in selecting examples cites only those presenting the most favorable aspect. The minority report does not oppose the formation of medical groups when they are a natural result of local conditions. Multiplication of clinics means multiplication of expensive equipment, and will add to the cost. It is significant that the committee found that the overhead in private practice was only two per cent higher than in medical groups in lower brackets of gross income, and as the income rose the difference was of less significance. The minority agrees that insurance operated by those doing business for profit is undesirable. The minority feels that the majority has minimized the dangers and evils of insurance which must be set over against its advantages.

The minority recommends that governmental competition in the practice of medicine be discontinued, and be limited to the indigent, to the promotion of public health, to governmental departments that obviously cannot be well served by the general medical profession and to the care of veterans suffering from bona fide service-connected disabilities, excepting tuberculosis and nervous and mental diseases.

The minority recommends the very careful trial, preferably through state and county units, of plans without destroying the fundamentals of the practice of medicine. To comply with this latter, a plan must assure the free choice of physician, it must be under the control of the medical profession, funds must be administered on a non-profit basis, and expended only after the expense has exceeded the patient's means. Minimum payment before advantage can be taken of any form of insurance is absolutely necessary to avoid its abuses.

THE INFLUENZA EPIDEMIC

Since the World War, at least six mild epidemics of influenza have been recorded in this country. In none of these have we observed those severe and fatal cases seen during the epidemic of 1918 and 1919. Following the alarm sounded by the United States Public Health Service in October of this year there has developed in this country and abroad an increasing number of influenza cases until at this time the epidemic has reached alarming proportions.

Statistical studies of this epidemic are of little value other than to indicate the trend of the disease, due to the fact that most physicians ignore their responsibility in reporting influenza to their local boards of health. The reported cases represent no more than one-tenth, or possibly even one-fiftieth, of the actual cases. In Iowa during the months of August, September and October no cases of influenza were reported to the State Department of Health. In November, when the epidemic was first reaching the boundaries of our state, five cases were reported. During the month of December, with influenza in large numbers in every community throughout the entire state, only forty-two cases were reported.

These figures are significant only in the fact that they indicate an increase of eight times the number of cases reported in December over that reported in November. In the city of Des Moines alone the Public Health Nursing Association announces that they are required to make from two hundred to three hundred calls daily on influenza cases, while the county physician estimates that fifty new patients daily are reported to his office. If the same number of cases exists among the non-indigent as those indicated among the indigent group—and we estimate that indigency, even in these times of depression, has not risen above 10 per cent, it is safe to assume that in the city of Des Moines alone there are between two and three thousand cases of influenza, with from three to five hundred new persons being affected daily. On the same basis of computation it would appear that in spite of the reported number of cases (December, forty-two) by the close of December there were approximately four hundred and fifty thousand cases in the state.

These figures, while speculative, indicate the prevalence of the disease and consequently the need for careful medical supervision of those who are afflicted. It is estimated that in the present epidemic 5 per cent of the cases develop complications, illustrating the need for careful medical supervision during the course of the illness. As might be expected, pneumonia leads the causes of death in these cases.

SPEAKERS BUREAU ACTIVITIES

IN APPRECIATION

At the last meeting of the extension postgraduate course at Washington, the members of the class enjoyed a turkey dinner, to which they invited their wives. During the dinner Doctor von Graff, one of the evening lecturers, spoke and Doctor Boice expressed the appreciation of the doctors of the work which they had been taking and commended Dean Houghton very highly for the splendid way in which he had made such opportunities available to the doctors in Iowa.

During the meeting, the members of the class adopted the following resolution:

Speakers Bureau of the Council:

Inasmuch as the Speakers Bureau of the Iowa State Medical Society, through the courtesy of Dean Henry S. Houghton of the College of Medicine of the State University of Iowa, has provided postgraduate courses to physicians in various locations in the state;

BE IT RESOLVED THAT: We, the physicians of the Washington, Henry, Keokuk and Jefferson County group, hereby formally express our appreciation and our commendation to the Speakers Bureau and to the various faculty members of the College of Medicine in providing this very practical and profitable course of instruction.

Committee:
J. A. DULIN, M.D., Sigourney.
J. L. DOYLE, M.D., Parnell.
W. L. ALCORN, M.D., Washington.

The following letter was received from the group taking the courses at West Union:

Speakers Bureau:

As secretary of the extension course in district number one, I am writing to express our appreciation of the excellent courses proffered to us. It was enjoyed by all. The attendance was good.

Yours truly,
C. C. HALL, M.D., Secretary.

The course on "Fundamentals of Medicine," which was given in Des Moines, ended December 16. At that meeting two of the doctors, W. W. Pearson, M.D., and Chas. F. Howland, M.D., entertained the other members of the group at dinner. During the dinner the members voiced their appreciation and commendation of this course.

One of the lecturers in this course expressed his interest in this type of postgraduate work and said that recently at the University where he teaches the belief was stated that this type of postgraduate medical education would soon become prevalent throughout the United States, taking the place of the old type at established colleges and universities. Extension courses to selected, interested groups meet the needs and convenience of the average doctor as no other kind can do.

The Bureau is anxious to bring extension postgraduate courses to any section of the state desiring them. Any group of forty or more interested doctors are urged to write in before plans are made for new courses.

GREETINGS

The Bureau wants to take this opportunity to wish all the medical societies and their members a very prosperous and successful New Year. May we also remind you that this year, as before, we are ready to serve you in any way that we can. Your program needs are our concern. The old slogan, "Good, Better, Best; May we never rest; Make the good better, and the better best," is peculiarly applicable to programs for our meetings. We shall be glad to have you call on us if we can help you. Your cooperation is also asked in sending in the names of those physicians in your locality who have exceptionally good talks or papers to present before either medical societies or lay organizations. We have the names of excellent speakers from all over the state, but are always anxious to add to it. We are asking you to help us in this way so that we may be the better qualified to plan interesting and valuable programs for the medical profession in Iowa in 1933.

RADIO TALKS

WOI—Fridays, 4:00 P. M.

WSUI—Thursdays, 8:00 P. M.

January 6—Vitamins.
January 13—Neuroses.
January 20—The Roentgen Ray in Preventive Medicine.
January 27—Influenza.
February 3—Neuritis.
February 10—Diphtheria.

PROGRAM SUGGESTION

County societies are urged to comply with the recommendation of the Medical Economics Committee to "devote at least one meeting a year to the discussion of medical economics." This is an excellent time of the year to do so, especially in view of the vast amount of material for discussion in the recent report of the Committee on the Costs of Medical Care. This report is producing such widespread discussion all over the United States, among scientific and lay groups alike, that it is well for the doctor of medicine to be familiar with the main points in it. If certain members of your local society are asked to discuss various sections of the report, a most worthwhile and interesting program will be presented.

SOCIETY PROCEEDINGS

Bremer County Annual Meeting

The Bremer County Medical Society held its annual banquet and election of officers at St. Joseph's Mercy Hospital in Waverly, Wednesday, December 14. Following the banquet, H. W. Rathe, M.D., of Iowa City, read a paper on The Treatment of Cardiac Failure, and showed motion pictures of the valve action in a bovine heart. Election of officers resulted in Dr. J. M. Stegeman of Tripoli being named president; Dr. F. J. Bries of Sumner, vice president; Dr. James E. Whitmire of Sumner, secretary and treasurer; Dr. L. C. Kern of Waverly, delegate; and Dr. F. R. Sparks, also of Waverly, alternate delegate.

J. E. Whitmire, M.D., Secretary.

Buchanan County Annual Meeting

The annual meeting of the Buchanan County Medical Society was held in Independence, December 21, opening with a six-thirty dinner, after which A. W. Erskine, M.D., of Cedar Rapids, presented the address of the evening, taking for his subject Medical Problems of Today. Officers elected were: Dr. N. W. Johnson of Quasqueton, president; Dr. J. F. Loeck of Aurora, vice president; Dr. M. C. Melrose of Independence, secretary and treasurer.

Buena Vista County Annual Meeting

Monday, November 28, members of the Buena Vista County Medical Society met in Storm Lake at the Bradford Hotel for the regular annual meeting, at which time the following officers were elected for the ensuing year: Dr. T. R. Campbell of Sioux Rapids, president; Dr. H. E. Farnsworth of Storm Lake, vice president; Dr. J. H. O'Donoghue of Storm Lake, secretary and treasurer; Dr. M. A. Armstrong of Newell, delegate; and Dr. J. W. Morrison of Alta, alternate delegate. After the business meeting and election, Dr. W. W. Bowen of Fort Dodge, president of the state society, spoke informally on matters of interest to the profession.

J. H. O'Donoghue, M.D., Secretary.

Carroll County

The Carroll County Medical Society met in regular session Wednesday, December 7, and the following program was presented:

Spina Bifida—C. E. Wolfe, M.D., Coon Rapids.

Primary Carcinoma of Lung—W. M. Shirley, M.D., Carroll.

Ectopic Pregnancy—Dr. Ambree, Arcadia.

Pneumococcus Meningitis with Recovery—W. L. McConkie, M.D., Carroll.

Tuberculosis of Liver (Primary?)—J. James Duffy, M.D., Dennison.

Hemorrhagic Disease of the Newborn—T. H. Van Camp, M.D., Breda.

Full Term Pregnancy Delivered Normally in a Prolapsed Uterus—A. J. Jongewaard, M.D., Jefferson.

Premature Separation Placenta with Eclampsia—C. C. Bowie, M.D., Carroll.

Infected Fingers—R. H. Lott, M.D., Carroll.

Five Eclampsia Cases—No Fatality—John R. Black, M.D., Jefferson.

Hydronephrosis in a Girl Aged Ten—Stricture Dilated with Fifteen Per Cent Return of Function—L. L. Davidson, M.D., Lake City.

Influenzal Myocardial Insufficiency with Death, in Ambulatory Patient—J. M. Jackson, M.D., Jefferson.

Food Sensitization Similating Nephritis—A. F. Smith, M.D., Manning.

Purpura Hemorrhagica with Removal of Spleen—F. W. Hobart, M.D., Lake City.

Ectopic Pregnancy with Old Abscess from a Ruptured Appendix Ten Years Previous — Carl Soe, M.D., Manilla.

Diabetic Coma—Paul W. Van Metre, M.D., Rockwell City.

Carcinoma of the Adenoid Tissue (Primary?)—A. R. Anneberg, M. D., Carroll.

Fatal Diphtheria in a Three Weeks' Old Breast-Fed, Nursing Infant—Edward M. Marks, M.D., Manilla.

Gun Shot Fracture Due to a V-Nosed Bullet—S. D. Martin, M.D., Carroll.

Duodenal Ulcer, Diarrhea, and No Free Hydrochloric Acid—L. W. Chain, M.D., Dedham.

Coronary Sclerosis—D. H. Hopkins, M.D., Glidden.

Gastric Hemorrhage, Pyelitis and Premature Delivery Simultaneously in a Previously Apparently Normal Person—W. A. Anneberg, M.D., Carroll.

Due to the lateness of the hour, election of officers and all other routine business was postponed until the January meeting.

W. A. Anneberg, M.D., Secretary.

Cerro Gordo County Annual Meeting

Paul A. O'Leary, M.D., head of the department of dermatology and syphilology of the Mayo Clinic, Rochester, furnished the scientific address for the Cerro Gordo County Medical Society, when that organization met in Mason City, Tuesday, December 20, for the regular annual meeting. His subject was General Therapeutic Problems of Syphilis. Election of officers at the business session resulted as follows: Dr. E. McEwen, president; Dr. T. E. Davidson, vice president; Dr. J. E. Marek, secretary and treasurer; Dr. E. L. Wurtzer, delegate; and Dr. George M. Crabb, alternate delegate. Dr. Wurtzer is of Clear Lake; all other officers are of Mason City.

Clayton County Annual Meeting

Dr. B. B. Everall of Monona was elected president of the Clayton County Medical Society, when the

members of that society met in Elkader, Tuesday, December 6. Other officers are: Dr. Arthur E. Beyer of Guttenberg, secretary; Dr. W. P. Thomas of McGregor, delegate, and Dr. W. J. McGrath of Elkader, alternate delegate.

Clinton County Annual Meeting

The Clinton County Medical Society held a business meeting Friday, December 16. The present officers were re-elected for the ensuing year. The Society decided to adopt a plan similar to that of Linn County, whereby a large proportion of examination fees for indigent cases going to Iowa City, is turned over to the society treasurer for use in preparing scientific programs. The society also went down on record as unanimously favoring the minority report of the Committee on the Costs of Medical Care.

Ralph F. Luse, M.D., Secretary.

Davis County Annual Meeting

Monday, December 5, the Davis County Medical Society met in Bloomfield for the annual election of officers, which resulted as follows: Dr. J. G. Stone, president; Dr. Charles D. Fenton, vice president; and Dr. H. C. Young, secretary and treasurer. All officers are from Bloomfield.

Decatur County Annual Meeting

The annual meeting of the Decatur County Medical Society was held Friday, December 9, at Dr. Fred A. Bowman's office in Leon, and the following two scientific papers presented: Basal Metabolism, with demonstration, G. P. Reed, M.D., of Davis City, and Acute Infectious Diseases, J. S. Coontz, M.D., of Leon. Officers for 1933 are: Dr. J. S. Coontz of Leon, president; Dr. J. E. McFarland of Leon, vice president; Dr. M. W. Rogers of Leon, secretary and treasurer; Dr. Coontz, delegate, and Dr. T. W. King, of Lamoni, alternate delegate.

M. W. Rogers, M.D., Secretary.

Des Moines County Annual Meeting

Dr. C. J. Lohmann was named president of the Des Moines County Medical Society at the annual meeting held in Burlington, Tuesday, December 13. Other officers are: Dr. J. N. Patterson, vice president, and Dr. F. H. Aid, secretary and treasurer. All officers are of Burlington.

Dubuque County Annual Meeting

The Dubuque County Medical Society held its annual election of officers Tuesday, December 6, in Dubuque at the Elks Club. Dr. Walter Cary of Dubuque was named president; Dr. E. F. Mueller of Dyersville, first vice president; Dr. W. A. Henneger of Dubuque, second vice president; Dr. Roy I. Theisen of Dubuque, secretary; Dr. F. W. Meyers of Dubuque, treasurer; Dr. J. C. Hancock of Dubuque, delegate; and Dr. H. G. Langworthy of Dubuque, alternate delegate.

Henry County Annual Meeting

Friday, December 16, the members of the Henry County Medical Society met at the Harlan Hotel in Mt. Pleasant for a six-thirty steak dinner and regular monthly meeting. Officers were elected for the coming year as follows: Dr. M. C. Mackin of Mt. Pleasant, president; Dr. J. M. Howe of Hillsboro, vice president; Dr. J. W. Laird of Mt. Pleasant, secretary and treasurer; Dr. Mackin, delegate; and Dr. W. A. Sternberg of Mt. Pleasant, alternate delegate.

J. W. Laird, M.D., Secretary.

Iowa County Annual Meeting

Election of officers at the annual meeting of the Iowa County Medical Society held in Marengo Thursday, November 29, resulted in Dr. Fred Sternagle of Williamsburg being named president; Dr. Orlo Wm. Hardy of Millersburg, vice president, and Dr. Irwin J. Sinn of Williamsburg, secretary and treasurer.

Jasper County Annual Meeting

Dr. E. A. McMurray of Newton was elected president of the Jasper County Medical Society at the regular meeting which was held Tuesday, December 6, in Newton. Other officers named are: Dr. J. A. William Johnson of Newton, vice president; and Dr. Fred Carpenter, also of Newton, secretary and treasurer.

Jefferson County Annual Meeting

The Jefferson County Medical Society met in Fairfield Friday, December 16, and elected officers for 1933, naming as president Dr. J. S. Gaumer. Dr. Ludwig Gitler was elected vice president; Dr. Kenneth G. Cook, secretary and treasurer; Dr. F. S. Bonnell, delegate; and Dr. R. A. McQuire, alternate delegate. All officers are Fairfield physicians.

Johnson County Annual Meeting

The Johnson County Medical Society held its final meeting for 1932, Wednesday, December 7, at the American Legion Building. The scientific program was presented by retiring officers and consisted of Tumors of the Breast, F. R. Peterson, M.D., and Leaves from a Doctor's Notebook, George C. Albright, M.D. The election of officers for 1933 resulted in the election of Dr. John T. McClintock, president; Dr. Philip C. Jeans, vice president; Dr. Horace M. Korns, secretary and treasurer; Drs. George C. Albright and E. D. Plass, delegates; and Drs. F. L. Love and F. M. Smith, alternate delegates. The society is in excellent active condition, having held ten meetings during the year, at seven of which the programs were presented by members of the society. Average attendance for the year has been seventy-two members and eight guests. The total resident membership is 125.

George C. Albright, M.D., Secretary.

Kossuth County Annual Meeting

A business meeting of the Kossuth County Medical Society was held Thursday, December 1, in the office of Dr. J. A. Devine at Bancroft, and the following officers elected for the ensuing year: Dr. Robert Williams of Lakota, president; Dr. W. T. Peters of Burt,

vice president, and Dr. Pierre Sartor of Titonka, secretary and treasurer. Following the business session, a Dutch lunch was served by Dr. Devine.

Lee County Annual Meeting

New officers for the Lee County Medical Society were elected Thursday, December 15, when members of the society met in Fort Madison for the regular annual meeting. Dr. William Rankin of Keokuk was named to serve as president during 1933; Dr. Val T. Doering of Fort Madison, vice president, and Dr. H. F. Noble of Fort Madison, secretary and treasurer. The scientific program was presented by members of the St. Louis University School of Medicine, and included Cancer of the Lip, William E. Leighton, M.D.; Effect of Theelin on Female Castrates, A. A. Werner, M.D., and Urologic Diagnosis, with motion pictures, H. H. Kramolowsky, M.D.

Linn County

Thursday, December 8, George W. Crile, M.D., of Lakeside Hospital, Cleveland, Ohio, presented a paper on A New Conception of, and a New Treatment for Neurocirculatory Asthenia and Peptic Ulcer. His paper was discussed by Drs. H. L. Beye of Iowa City, W. A. Rohlf of Waverly, W. W. Bowen of Fort Dodge, Charles B. Taylor of Ottumwa, Charles W. Krause of Cedar Rapids, and John Hamilton, also of Cedar Rapids. Attendance at this meeting numbered two hundred and sixty members and guests, and is a record for the society.

The January meeting will be held at the Hotel Roosevelt, with Joseph Baer, M.D., of the University of Chicago, as guest speaker. Dr. Baer has chosen for his subject, The Cervix During Labor and Postpartum.

T. F. Hersch, M.D., Secretary.

Marion County Annual Meeting

The Marion County Medical Society held its sixtieth annual meeting at the Memorial Hall in Knoxville, Tuesday, December 13. A business session was held at 5:45 P. M., at which the following officers were elected to serve during 1933: Dr. F. P. Ralston of Knoxville, president; Dr. E. P. Bell of Pleasantville, vice president; Dr. C. S. Cornell of Knoxville, secretary and treasurer; Dr. E. C. McClure of Bussey, delegate; and Dr. H. L. Bridgeman of Knoxville, alternate delegate. After a six-thirty banquet, a symposium on Mirroring the Medical Profession, was presented with the following speakers: The Press, by Mr. M. L. Curtis, editor of the Knoxville *Journal*, Knoxville; The Clergy, by the Rev. John Wesselink, president of Central College, Pella; The Schools, by Mr. G. R. Hemming, superintendent of schools, Pleasantville; The Lawyers, by the Hon. T. C. Whitmore of Atlantic; The Wives, by Mrs. Channing G. Smith of Granger.

Marshall County Annual Meeting

Dr. F. L. Wahrer was elected president of the Marshall County Medical Society when that organization met Tuesday, December 6, for the annual election of officers. Dr. B. L. Trey was chosen vice president, and Dr. J. J. Noonan was renamed secretary and treasurer. Dr. A. D. Woods of State Center was selected as delegate, with Dr. Noonan as his alternate delegate. A paper on Pulsating Exophthalmus was read by Andrew H. Woods, M.D., of State Center, after which John McLeod, M.D., of Marshalltown, presented a paper on the same subject, with lantern illustrations. R. S. Grossman, M.D., of Marshalltown, concluded the program with two cases of pneumothorax, in which the patients suffered spontaneous collapse of the lungs.

Mills County Annual Meeting

Members of the Mills County Medical Society held their regular annual election Thursday, December 8, when the group met as guests of the medical staff of the Iowa Institution at Glenwood. The program opened with clinical cases presented by Ward A. DeYoung, M.D., of Glenwood, and D. W. Harman, M.D., of Glenwood, after which an address on The Doctor in Law, was made by B. W. Byington, attorney, of Malvern. The program concluded with a paper by I. U. Parsons, M.D., of Malvern, on The Ordinary Happenings in a Doctor's Office. Election of officers resulted as follows: Dr. Harold B. Dye, president; Dr. Ward A. DeYoung, vice president; Dr. J. M. Donelan, secretary and treasurer; Dr. I. U. Parsons of Malvern, delegate, and Dr. Donelan, alternate delegate.

J. M. Donelan, M.D., Secretary.

Page County Annual Meeting

Two Omaha physicians furnished the scientific program for the Page County Medical Society when members of the society met at the Delmonico Hotel in Shenandoah Thursday, December 1. Herbert H. Davis, M.D., addressed the group on The Significance of a Lump in the Breast, and George Pratt, M.D., presented a paper on Pneumonia and Upper Respiratory Infections. Results of the annual election are: Dr. W. F. Stotler of Shenandoah, president; Dr. C. C. Parriott of Clarinda, vice president; Dr. H. McK. Bunch of Shenandoah, secretary and treasurer; Dr. R. J. Mathews of Clarinda, delegate, and Dr. J. F. Aldrich of Shenandoah, alternate delegate.

H. McK. Bunch, M.D., Secretary.

Polk County Annual Meeting

The annual meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held at the Des Moines Club Tuesday, December 13. A buffet supper was served to the 159 members and guests at six-thirty. Officers for the new year were elected as follows: Dr. Fred Moore, president-elect; Dr. L. K. Meredith, secretary and treasurer; Drs. Walter E. Baker, Thomas A. Burcham, Russell C. Doolittle and Fred Moore, delegates; Drs. Clifford W. Losh, John Russell, William E. Sanders, and John B. Synhorst, alternate delegates. Dr. Robert L. Parker was then inducted as president of the society. The meeting was concluded with the showing of motion pictures taken by Dr. Burcham during his visits at the Olympic Games and Cheyenne Rodeo

last summer. Many members remained to enjoy the privileges of the Club for the evening.

E. M. Kingery, Executive Secretary.

Poweshiek County Annual Meeting

Members of the Poweshiek County Medical Society met for a six-thirty dinner meeting Tuesday, December 6, at which time the annual election was held, resulting as follows: Dr. F. E. Simeral of Brooklyn, president; Dr. S. D. Porter of Grinnell, vice president; Dr. E. E. Harris of Grinnell, secretary; Dr. J. T. Padgham of Grinnell, treasurer; Dr. E. B. Williams of Montezuma, delegate; Dr. C. D. Busby of Brooklyn, alternate delegate.

Pottawattamie County Annual Meeting

Dr. J. P. Cogley was elected president of the Pottawattamie County Medical Society at the annual business meeting held Monday, December 20. Dr. Gerald V. Caughlan was named vice president, and Dr. Arnold Jensen, secretary and treasurer.

Scott County

The Scott County Medical Society met Tuesday, December 6, in Davenport, with Clifford G. Grulee, M.D., of Chicago, as the guest speaker. Dr. Grulee is head of the department of pediatrics, Rush Medical School, and took for his subject, Intracranial Hemorrhage of the New-Born.

Sioux County Annual Meeting

Thursday, December 22, the Sioux County Medical Society met in the Hull Hospital at Hull to hold its annual election of officers. Dr. John DeBey of Orange City, was named president; Dr. A. L. Locke of Rock Valley, vice president; and Dr. F. C. Bendixen of Ireton, secretary and treasurer.

F. C. Bendixen, M.D., Secretary.

Wapello County Annual Meeting

Newly elected officers for the Wapello County Medical Society are: Dr. D. L. Rater, president; Dr. E. B. Hoeven, vice president; Dr. Evon Walker, secretary and treasurer; Dr. F. L. Nelson, delegate, and Dr. Donald McElderry, alternate delegate. The annual meeting was held in Ottumwa, Tuesday, December 6.

Washington County Annual Meeting

Dr. W. E. Anderson of Washington is the new president of the Washington County Medical Society, having been elected to this office at the annual meeting held in Washington, Tuesday, December 13. Other officers are: Dr. E. E. Blythe of Riverside, vice president; Dr. W. S. Kyle of Washington, secretary and treasurer; Dr. W. L. Alcorn of Washington, delegate; and Dr. E. D. Miller of Wellman, alternate delegate.

Webster County Annual Meeting

At a business meeting of the Webster County Medical Society held Monday, December 5, in Fort Dodge, the following officers were elected for the year 1933: Dr. E. M. Kersten, president; Dr. E. B. Dawson, vice president; Dr. John C. Shrader, secretary and treasurer; Dr. Roland Stahr, delegate; and Dr. J. H. Bruce, alternate delegate.

John C. Shrader, M.D., Secretary.

Winneshiek County Annual Meeting

The Winneshiek County Medical Society met for the regular annual meeting Wednesday, December 14, at Calmar, and the following officers were elected to serve during the new year: Dr. T. N. Stabo of Decorah, president; Dr. Edward F. Hagen, also of Decorah, vice president; and Dr. J. H. Holtey of Ossian, secretary and treasurer.

Woodbury County Annual Meeting

Dr. John H. Henkin will head the Woodbury County Medical Society during the year 1933, being elected president of that organization Tuesday, December 6. Serving with him are Dr. L. R. Tripp, vice president, and Dr. Lawrence E. Pierson, secretary and treasurer.

Four County Medical Association

The Four County Medical Association, composed of Buena Vista, Cherokee, Ida and Plymouth counties, held its annual meeting Tuesday, December 13, in Cherokee, and elected the following physicians to serve during 1933: Dr. M. J. Joynt of LeMars, president; Dr. H. E. Farnsworth of Storm Lake, vice president; and Dr. J. H. Wise of Cherokee, secretary and treasurer. The scientific program, which was presented immediately after the business session, consisted of: Acute Lymphatic Leukemia in Infancy, H. E. Farnsworth, M.D., of Storm Lake; Leukemias and Their Treatment, W. W. Larsen, M.D., of LeMars; Syphilis of the Central Nervous System, L. P. Ristine, M.D., of Cherokee; and motion picture slides on Traumatic Surgery of the Extremities.

AUXILIARY NEWS

Mills Auxiliary Elects Officers

Newly elected officers for the Mills County Auxiliary are: Mrs. Thomas B. Lacey of Glenwood, president; Mrs. Edgar Christy of Hastings, vice president; and Mrs. D. W. Harman of Glenwood, secretary and treasurer. The meeting was held in conjunction with the annual meeting of the Mills County Medical Society in Glenwood, Thursday, December 8.

INTERESTING NEWS

In Brief

Refuting anti-vaccination propaganda, R. T. Westman, Chief of the Contagious Division of the Minneapolis Department of Health, recently stated that during the last thirty years, 88.1 per cent of all cases of smallpox in Minneapolis occurred in the unvaccinated. The majority of the 11.9 per cent vaccinated had been vaccinated in infancy without repetition of the vaccination in adult life.

The Public Welfare medal for eminence in ap-

plication of science to public welfare was recently awarded to Dr. Wm. Hallock Park of New York City for his work as head of the research laboratories of the New York City Health Department, and as a leader in research and application of scientific discoveries for prevention of disease.

Effective in February the United States Public Health Service, now in the Treasury Department, will be transferred to the Interior Department, and made part of a new division of Education, Health, and Recreation, which will include bureaus now under the authority of the Interior Department.

Two recent decisions of the Iowa Supreme Court are of outstanding importance to the medical profession: (1) Proof of performing an illegal operation may be the basis for depriving a physician of his license. (2) Osteopaths may not prescribe medicine to be taken internally.

Following a recent inspection of the hospital facilities for Indians in Tama County recommendations have been filed with the Secretary of the Interior requesting an auxiliary hospital for the medical care of Indians suffering from diseases other than tuberculosis.

An organization of university hospital executives has recently been perfected as an outcome of a conference of university hospital superintendents held in Iowa City. Robert E. Neff, University of Iowa Hospital Administrator, was elected president of the group.

Beginning with the fall term of 1933 Professor Albert Einstein, internationally renowned physicist of Berlin, will assume an active position on the staff of the unique Institute for Advanced Study established at Princeton University.

Stimulated by the effort of legislators to define intoxicating beverage, the *Science News Letter* for December 17 published an article by Jane Stafford stating in its headlines: "Intoxicating drink cannot be scientifically defined now."

Contracts for the medical care of the poor have been let to the county medical society in several Iowa counties. The following is an incomplete list: Cherokee, Buena Vista, Pocahontas, Ida, Sac, Carroll, and Crawford Counties.

Kansas in the recent state election defeated John R. Brinkley for governor by a considerable majority, indicating, no doubt, that the "goat gland doctor" had lost much prestige in his home state since the last gubernatorial election.

During the last three years the average cost per indigent patient at the University of Iowa Hospital has been reduced 32 per cent.

According to a report of the American College of Surgery, the hospital death rate fifteen years ago was nine per cent as contrasted with the mortality rate of three per cent last year for all hospitals.

"Professional skill without a cultural background is barren for genuine future success," is the advice given recently to pre-medic students in the University of Iowa by Dean Henry S. Houghton.

Members of the Marshalltown Kiwanis Club recently went on record as opposed to the Community Medical Center plan recommended by the Committee on the Costs of Medical Care.

The Illinois State Medical Society is reported to be considering a plan for cooperative advertising to be managed by the component county medical societies of the state.

The first experiment on a human being with the 500,000 volt cathode ray apparatus for the treatment of cancer was recently made in Berlin, Germany.

According to newspaper reports a Milford, Iowa, physician has agreed to pay twenty-five cents per bushel for corn received in payment of accounts.

PERSONAL MENTION

Dr. W. Eugene Wolcott was elected president of the Des Moines Kiwanis Club, at its annual meeting, Wednesday, November 23.

Dr. Walter D. Abbott, Des Moines nerve specialist, spoke before the first joint meeting of the Simpson Y. M. and Y. W. C. A., Friday, November 18, at Indianola. His subject was "Americanitis."

Dr. I. D. Kauffman, who for the past thirty-two years had practiced medicine in State Center, has announced his retirement from active practice, with the beginning of the new year. With his wife and daughter, Dr. Kauffman is leaving for California, where the family will make an extended visit.

Dr. John Bradley of Cedar Rapids, is moving to Iowa City, where he will be associated in practice with Dr. D. M. Lierle.

Dr. Henry S. Houghton addressed the Iowa City Kiwanis Club, Tuesday, November 29, taking as his subject, "Clouds in Manchuria." Dean Houghton spoke from personal observation after many years spent in the countries of the Far East.

Dr. M. C. Melrose, member of an oldtime Buchanan County family, is locating in Independence for the

practice of medicine, coming from Idaho, where he has practiced for several years.

Dr. Robert McGrath is leaving Eagle Grove and moving to New York City, where he has accepted a position in the Postgraduate Hospital and Medical School of New York.

Dr. Andrew H. Woods of Iowa City, spoke before the Iowa City Rotary Club Monday, November 21, on "Insanity: What It Is and What Causes It."

Dr. Arnold J. Mullman, formerly of Talmadge, Nebraska, has purchased the equipment of Dr. Don L. Braddy of Adel, and plans to begin the practice of medicine there about the first of the year. Dr. Mullman is a graduate of the Creighton University School of Medicine, and has been practicing about five years.

Dr. A. A. Toubes, a recent graduate of the State University of Iowa College of Medicine, has purchased the office equipment of the late Dr. Frederick Alden of Des Moines. Dr. Toubes comes direct from Chicago, where he has been taking advanced work in the department of pathology at the University of Chicago.

Dr. J. C. Donahue of Centerville, was elected president of the local Kiwanis Club Thursday, December 1.

Dr. Louis J. Frank has opened offices at 419 Davidson Building in Sioux City, where he will practice his specialty of dermatology. Dr. Frank comes to Iowa from Kansas City, Missouri, having been associated with Dr. R. L. Sutton for the past four years. Before going to Kansas City, he served Buffalo, New York, as city physician.

MARRIAGES

The marriage of Miss Lucille Cue of Shellsburg and Dr. M. E. Dingman of Urbana, took place recently at Rock Island, Illinois.

Announcement has just been made of the wedding of Miss Johann Dickson and Dr. E. G. Kieck, both of Cedar Rapids, which took place in Chicago on Thanksgiving Day. Mrs. Kieck is a graduate nurse and has been nursing for several years in Cedar Rapids, where Dr. Kieck has been practicing for seven years.

Another surprise announcement is that of Miss Arline Capper of DeWitt, and Dr. W. R. Mechtenberg of Durant, who were married August 23, at Old St. Mary's Church in Chicago. Dr. and Mrs. Mechtenberg will live in Durant, where the doctor has been practicing for the past two years.

Dr. Edwin C. O'Connor returned to Alta Vista after a week's visit in Chicago, and brought with him Mrs. O'Connor, who, before her marriage to Dr. O'Connor, Saturday, November 19, was Miss Cecelia McGuire of that city. The young couple are now at home in Alta Vista, where Dr. O'Connor has been practicing almost a year.

DEATH NOTICES

Burd, Edwin, of Lisbon, aged eighty-six, died December 6, after a short illness. He was graduated in 1871 from the University of Pennsylvania College of Medicine, Philadelphia, and at the time of his death was a Life Member of the Linn County and Iowa State Medical Societies.

Keogh, John Victor, of Dubuque, aged fifty-eight, died suddenly December 2. He was graduated in 1899 from the University of Pennsylvania College of Medicine, Philadelphia, and at the time of his death was a member of the Dubuque County Medical Society.

Meis, Edward William, of Sioux City, aged fifty-five, died December 7, after an illness of several months' duration. He was graduated in 1900 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Woodbury County Medical Society.

Mershon, George Alonzo, of Marshalltown, aged eighty, died December 20, following a long illness. He was graduated in 1882 from the Physio-Medical Institute, Cincinnati, and at the time of his death was a member of the Marshall County Medical Society.

Moon, Arnold Carpenter, of Cedar Rapids, aged seventy-two, died December 13. He was graduated in 1884 from the State University of Iowa College of Medicine, and at the time of his death was a Life Member of the Iowa County and Iowa State Medical Societies.

University Hospitals
MONTHLY CLINIC
Friday, January 20, 1933

10:00 to 11:00 A. M.
General Surgical Clinic
11:00 to 12:00 Noon
Genito-Urinary Surgical Clinic
12:15 P. M.
Luncheon — Doctors' Dining Room
1:00 to 2:00 P. M.
Medical Clinic
2:00 to 3:00 P. M.
Pediatric Clinic

History of Medicine in Iowa

Edited by the Historical Committee

Dr. William Jepson, Sioux City
Dr. Arthur D. Woods, State Center
Dr. Frank M. Fuller, Keokuk
Dr. Walter L. Bierring, Des Moines
Dr. John T. McClintock, Iowa City

History of the Nursing Profession in Iowa from 1904 to 1931*

STATE ORGANIZATION

No attempt has been made in this history to appraise nurses or the nursing profession in Iowa before 1904. It was about this time, however, that a sentiment had developed in every section of the state to the effect that the practice of nursing should be protected by an act of the legislature requiring the registration of all graduate nurses. Up to this time no accurate record had been kept as to the number of graduate nurses in Iowa but it is certain that there must have been several hundred and their services were available to all parts of the state. This does not take into account the great number of untrained women who were caring for the sick as a means of livelihood and the graduate nurses were desirous of having some distinction made between their services and those of this group. The apparent need for such distinction and for a more united program in nursing activities was discussed in informal gatherings, alumnae meetings and county organizations. It was finally agreed that the best way to get the desired result was to form a state organization, thus bringing together the smaller groups. This would act as a clearing house for information and instruction regarding progress.

As the result of correspondence between officers of local nursing organizations, a nurses' convention was held in Des Moines, January 4, 1904, at which the following officers were elected: R. Estella Campbell, president; Clara Craine, first vice president; Dora Metcalf, second vice president; Mary Redlingshafer, secretary; Jane Garrod, treasurer, and Mary C. James, auditor. Plans were made for the first annual meeting to be held at Davenport in June of that year.

Subsequent annual meetings were held in Cedar Rapids, 1905; Des Moines, 1906; Ottumwa, 1907; Sioux City, 1908; Dubuque, 1909; Des Moines, 1910; Waterloo, 1911; Davenport, 1912; Des Moines, 1913, and Boone, 1914. In addition to these regular conventions, it should be remembered that the state association has each year since its organization kept in touch with the national association through its official delegates.

The following brief summary presents the outstanding accomplishments of the first ten years of the state organization:

1. Secured registration law
2. Registered 1,020 nurses
3. Organized 420 members of the Iowa State Association of Registered Nurses
4. Affiliated with the National Association Alumnae
5. Perfected the Red Cross Nursing Service organization
6. Participated in two state wide projects, first to improve the nursing schools of the state and second to improve nursing service in state and county institutions.

In accordance with a general plan of the American Nurses Association to reorganize on a different basis of membership, the State Association revised its constitution in 1919. Under the new plan, members of alumnae associations automatically became members of the district, state and national associations.

Just as we find organization and legislation the high points of interest during the first decade, so we now find nursing education of greatest significance during the second ten years' period. Interest was shown in establishing scholarships and loan funds and other steps were taken to broaden the educational requirements of nurses. The State Association adopted the recommendation of the Board of Nurse Examiners for a new basis of accrediting and standardizing schools of nursing in 1919. The new basis was broader in concept

* This article is a resumé of the book, "Historical Outline of the Iowa State Association of Registered Nurses and Related Organizations," by Emma C. Wilson, historian for the State Association of Registered Nurses.

and more explicit in requirement of teaching equipment and conditions of student residence.

Other activities during this period include the organization of the Iowa State League of Nursing Education, March 6, 1914, at Dubuque, and the publication of the State Association's first periodical in 1916. This was known as the Registered Nurses Record and it appeared at more or less irregular intervals until 1922, when the name was changed to "The Bulletin." Since that time it has been issued quarterly.

Two meetings of the International Congress of Nurses had been held: one in 1915 in San Francisco, to which the Iowa Association sent two delegates; the other in Helsingfors, Finland, in 1925, which was attended by the president of the State Association and five other Iowa nurses.

Since 1904, the State Association, through its legislative committee, has worked constantly to obtain inspection of training schools by an educational director. In 1928, that goal was accomplished and definite improvements are already noticeable in the schools of the state.

Another important step was taken in 1926, when our State Association joined those of Illinois, Indiana, Wisconsin and Michigan to form the Midwest Division of the American Nurses Association. The formation of this organization was a cooperative effort to localize interests and problems peculiar to the area. In 1931 the third biennial convention was held in Des Moines in conjunction with the twenty-eighth annual convention of the Iowa State Association of Registered Nurses.

THE FLORENCE NIGHTINGALE PLEDGE

"I solemnly pledge myself before God and in the presenee of this assembly to pass my life in purity and to practice my profession faithfully. I will abstain from whatever is deleterious and mischievous, and will not take or knowingly administer any harmful drug. I will do all in my power to elevate the standard of my profession, and will hold in confidenee all personal matters committed to my keeping, and all family affairs coming to my knowledge in the praetiee of my calling. With loyalty will I endeavor to aid the physician in his work and devote myself to the welfare of those committed to my care."

DISTRICT ORGANIZATION

The first district is composed of the following counties: Lyon, Osceola, Dickinson, Emmet, Sioux, O'Brien, Clay, Palo Alto, Plymouth, Cherokee, Buena Vista, Woodbury, Ida, Sac, Monona, Crawford, and Carroll. The first attempt at organization was in November, 1906, in Sioux City, and accredited schools of nursing in the district are: Methodist Hospital, Sioux City; St. Joseph's Mercy Hospital, Sioux City; St. Vincent's Hospital, Sioux City; Lutheran Hospital, Sioux City; St. Anthony Hospital, Carroll; Sacred Heart Hospital, Le Mars.

The second district, which is composed of Mahaska, Keokuk, Washington, Louisa, Monroe, Wapello, Jefferson, Henry, Des Moines, Appanoose, Dallas, Van Buren and Lee counties, had its first organization in 1904 at Ottumwa, with ten members. This was the nucleus for the district organization which was formed in 1918. Accredited schools include: Ottumwa General Hospital, Ottumwa; Burlington Protestant Hospital, Burlington; St. Joseph's Mercy Hospital, Keokuk; Graham Hospital, Keokuk; Mercy Hospital, Burlington; St. Joseph Hospital, Ottumwa; Mahaska County Hospital, Oskaloosa; St. Joseph's Mercy Hospital, Centerville.

Dubuque, Delaware, Buchanan, Clayton, Fayette, Allamakee, and Winneshiek counties make up the third district, the original nurses' organization of which was formed in 1902 at Dubuque. Accredited schools of nursing in the third district are: Finley Hospital, Dubuque; Mercy Hospital, Dubuque.

The fourth district, composed of Franklin, Butler, Bremer, Hardin, Grundy, Black Hawk, and Marshall counties, organized in 1918 in Waterloo, although an informal group had been meeting since 1903. St. Thomas Hospital, Marshalltown; Presbyterian Hospital, Waterloo; Evangelical Deaconess Hospital, Marshalltown; Allen Memorial Hospital, Waterloo, and The Convalescent Home, Waterloo, are the accredited schools of this district.

The fifth district, which is composed of Tama, Benton, Linn, Poweshiek, Iowa, Johnson, Jones, and Cedar counties, really organized as a district in 1918 in Cedar Rapids. Included in the accredited schools of this district are: The State University School of Nursing, Iowa City; St. Luke's Methodist Hospital, Cedar Rapids; Mercy Hospital, Iowa City, and Mercy Hospital, Cedar Rapids.

Scott, Jackson, Muscatine and Clinton counties comprise the sixth district, in which St. Luke's Alumnae Association of Davenport was organized in 1899, although the district organization proper was not formed until 1919. The four accredited schools in the sixth district are: St. Luke's Hospital, Davenport; St. Joseph's Mercy

Hospital, Davenport; Jane Lamb Memorial Hospital, Clinton, and Mercy Hospital, Clinton.

The seventh district is composed of the following counties: Dallas, Polk, Jasper, Madison, Warren, Wayne, Marion, Clark, Lucas, and Decatur. The district was organized in June, 1903, and has the following accredited schools: Iowa Methodist Hospital, Des Moines; Iowa Lutheran Hospital, Des Moines; Mercy Hospital, Des Moines, and Broadlawns Hospital, Des Moines.

The eighth district, including Story, Boone, Greene, Calhoun, Webster, Hamilton, Pocahontas, Humboldt, and Wright counties, was organized as a district in 1918. The only accredited school of nursing located in this district is St. Joseph's Mercy Hospital at Fort Dodge.

The ninth district, composed of Harrison, Shelby, Audubon, Guthrie, Pottawattamie, Cass, Adair, Mills, Montgomery, Adams, Union, Fremont, Page, Taylor, and Ringgold counties, completed its organization in 1918. However, the Graduate Nurses' Association of Council Bluffs was formed in 1902. The three accredited schools in the district are: The Jennie Edmundson Memorial Hospital, Council Bluffs; St. Joseph's Mercy Hospital, Council Bluffs, and The Greater Community Hospital, Creston.

Kossuth, Winnebago, Worth, Mitchell, Howard, Hancock, Cerro Gordo, Floyd, and Chickasaw are the counties in the tenth district. A Kossuth county association was effected as early as 1909, but the district itself did not perfect a permanent organization until 1920. Park Hospital and St. Joseph's Mercy Hospital, both located at Mason City, are the only accredited schools of nursing in the tenth district.

RELATED ORGANIZATIONS

The Iowa State Association of Registered Nurses, as a component part of the American Nurses Association, became affiliated with the National Red Cross, a union which resulted in organizing the National Committee on Red Cross Nursing Service. This committee with its local branches enrolled the nurses to serve in the World War. If space permitted, much could be written about the Iowa nurses who served during the war; tragic stories told of supreme sacrifices paid for service to humanity. Suffice it to say that Iowa contributed her share of fearless young women who performed such golden deeds of unrecognized bravery and heroism during those turbulent days.

Public Health Nursing, in the form of Visiting Nursing, first made its appearance in Iowa at Davenport in 1902. Sioux City adopted the plan in 1906, Des Moines in 1908, Burlington and Fort Dodge in 1909, Dubuque and Waterloo in 1910, Iowa City and Keokuk in 1913, and so on until many communities employed this type of service. The above named cities, with Clinton (1915), Muscatine (1916), Cedar Rapids and Council Bluffs (1917), Ottumwa (1920), and Mason City (1923), are all continuing the work with some changes in the management and financial support. Such organizations as school boards, local chapters of the American Red Cross, or women's clubs, have sponsored public health nursing in the state, usually in cooperation with county health authorities. Sometimes two or three organizations work together to keep nurses in the field. In some of the larger cities the charities, including public health nursing, are all under one head, known as the community chest or welfare bureau, each organization operating on an approved budget.

IOWA NURSE PRACTICE ACT

The story of how the Nurse Practice Act was won is a story of partial success, at least, since by its provisions, all graduate nurses expecting to practice their profession must register. Other features of legislative enactment which the nurses desired were rejected, but these were mainly matters of administration, which under the present law are, with time and patience, proving quite effective. In 1915, reciprocity with other states was established on the basis of a certificate obtained by examination.

POLK COUNTY HISTORY COMPLETED

In March, 1927, there appeared in the Journal of the Iowa State Medical Society, a resumé of medical history in Polk county up to that time. Additional information has been assembled since then and the history of medicine in Polk county has been brought up to date with the publication of this material in the September to December numbers, inclusive, of the *Bulletin* of the Des Moines Academy of Medicine and Polk County Medical Society.

A CENTURY OF PEPPERS

For the third time in the course of a hundred years, a Pepper signed a diploma from the University of Pennsylvania College of Medicine for another Pepper. Dr. William Pepper of the class of 1832 signed the diploma of his son, Dr. William Pepper, Jr., in 1864, when the senior Pepper was professor of medicine. Dr. Pepper, Jr., served the university for many years as professor of the theory and practice of medicine, and in 1897 signed the diploma of his son, Dr. William Pepper 3d, who is now dean of the school of medicine. Last June, the third Dr. Pepper signed the diploma of his son, Dickinson Sargeant Pepper, who was graduated just one hundred years after his great grandfather, who started this chain of events, unique in the history of medical schools and families.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

*ACCIDENTS, NEUROSES AND COMPENSATION—By James H. Huddleson, M.D., Associate in Neurology, Columbia University—with a foreword by J. Ramsay Hunt, M.D., Sc.D., Professor of Neurology, Columbia University. The Williams & Wilkins Company, Baltimore, 1932.—Price, $4.00.

*AMERICAN ILLUSTRATED MEDICAL DICTIONARY (Sixteenth Edition)—A complete dictionary of the terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Nursing, Veterinary Science, Biology, Medical Biography, etc.—By W. A. Newman Dorland, M.D., Member of the Committee on Nomenclature and Classification of diseases of the American Medical Association.—1493 pages, 941 illustrations, 279 portraits.—W. B. Saunders Company, Philadelphia and London, 1932.—Price, flexible and stiff binding, plain, $7.00; thumb index, $7.50.

*CLINICAL ENDOCRINOLOGY OF THE FEMALE: By Charles Mazer, M.D., F.A.C.S., Assistant Professor of Gynecology and Obstetrics, Graduate School of Medicine, University of Pennsylvania; and Leopold Goldstein, M.D., Demonstrator of Obstetrics, Jefferson Medical College.—518 pages with 117 illustrations.—W. B. Saunders Company, Philadelphia and London, 1932.—Price, $6.00.

*INTERNAL MEDICINE—Its Theory and Practice in Contributions by American Authors. Edited by John H. Musser, B.S., M.D., F.A.C.P., Professor of Medicine in The Tulane University of Louisiana School of Medicine; Senior Visiting Physician to the Charity Hospital, New Orleans, Louisiana. Octavo, 1316 pages, illustrated. Cloth, $10.00, net.

*MINOR SURGERY (Second Edition)—By Frederick Christopher, M.D., F.A.C.S., Assistant Professor of Surgery at the Northwestern University Medical School, Chicago.—Foreword by Allen B. Kanavel, M.D., F.A.C.S., Professor of Surgery, Northwestern University Medical School.—998 pages with 687 illustrations.—W. B. Saunders Company, Philadelphia and London, 1932.—Price, $10.00.

*MEDICAL CLINICS OF NORTH AMERICA (Philadelphia Number—July 1932)—Vol. xvi, No. 1 (Issued serially, one number every other month).—290 pages, 75 illustrations. Per Clinic year, July 1932 to May 1933.—Paper, $12.00; Cloth, $16.00. W. B. Saunders Company, Philadelphia and London, 1932.

*THE MEDICAL CLINICS OF NORTH AMERICA.—New York Number, Vol. xv, Number 5, March, 1932. Published by W. B. Saunders Company, Philadelphia & London.

*MEDICINE AND THE STATE—The Relation between the Private and Official Practice of Medicine, with Special Reference to Public Health—By Sir Arthur Newsholme, K.C.B., M.D., F.R.C.P., with foreword by William H. Welch, M.D., LL.D., London: George Allen & Unwin, Ltd.—Baltimore: Williams & Wilkins Co., 1932.

*MINOR SURGERY OF THE URINARY TRACT:—By Hermon C. Bumpus, Jr., Ph.B., M.D., M.S. in Urology, F.A.C.S., Section on Urology, the Mayo Clinic; and Associate Professor of Urology, the Mayo Foundation With a Chapter on Caruncles by John L. Crenshaw, M.D., Section on Urology, the Mayo Clinic; and Associate Professor of Urology, the Mayo Foundation; and a Chapter on Postoperative Care by Anson L. Clark, M.E., M.D., Section on Urology, the Mayo Clinic, Rochester, Minnesota. Octavo of 124 pages with 57 illustrations. Philadelphia and London: W. B. Sanders Company, 1932. Cloth, $3.00 net.

*ORTHOPEDICS IN CHILDHOOD—By William L. Sneed, M.D., Attending Surgeon, Hospital for the Relief of the Ruptured and Crippled, etc.—(Everyday Practice Series, Edited by Harlow Brooks, M.D.)—318 pages, 145 illustrations.—J. B. Lippincott Company, Philadelphia and London, 1931.—Price, $5.00.

*PATHOLOGY FOR NURSES—By Eugene G. Piette, M.D.—251 pages, with 65 illustrations.—F. A. Davis Company, Philadelphia, 1932.—Price, $1.75.

*THE PRACTICAL MEDICINE SERIES.—General Medicine.—Edited by George H. Weaver, M.D., Lawrason Brown, M.D., George R. Minot, M.D., S.D., William B. Catle, M.D., William Stroud, M.D., Ralph C. Brown, M.D.—Series 1932.—837 pages. The Year Book Publishers, Inc., Chicago, 1932.—Price, $3.00.

*THE PRACTICAL MEDICINE SERIES.—Dermatology and Syphilis, Edited by Fred Wise, M.D., Professor of Dermatology and Syphilology, New York Post-Graduate Medical School and Hospital of Columbia University, and Marion B. Sulzberger, M.D., Associate in Dermatology and Syphilology.—Urology, Edited by John H. Cunningham, M.D., Associate in Genito-Urinary Surgery, Harvard University Post-Graduate School of Medicine.—Series of 1931.—The Year Book Publishers, Inc., Chicago.—Price, $2.25.

PRINCIPLES OF CHEMISTRY—An Introductory Textbook of Inorganic, Organic and Physiological Chemistry for Nurses and Students of Home Economics and Applied Chemistry.—With Laboratory Experiments.—By Joseph E. Roe, Ph. D.—Professor of Biochemistry, George Washington University Medical School. Third Edition.—The C. V. Mosby Company, St. Louis, 1932. Price, $2.50.

*PSYLLIUM SEED: THE LATEST LAXATIVE—By Dr. J. F. Montague, Medical Director Montague Hospital for Intestinal Ailments. 170 pages with 20 illustrations. Montague Hospital for Intestinal Ailments, New York City, 1932.

* Book Review in this issue.

BOOK REVIEWS

ACCIDENTS, NEUROSES AND COMPENSATION

By James H. Huddleson, M.D., Associate in Neurology, Columbia University—with a foreword by J. Ramsay Hunt, M.D., Sc.D., Professor of Neurology, Columbia University. The Williams & Wilkins Company, Baltimore, 1932. Price, $4.00.

The neuroses today constitute one of the major problems of neuropsychiatry. Practically all authorities are agreed on the psychic origin of the traumatic neuroses, but the medical and the medico-legal aspects of these conditions constitute an ever-increasing problem.

The author of this book, with a background of experience gained not only in private practice in a large neurologic center, but also because of an unusual opportunity to observe these cases during the World War, is eminently prepared to discuss this problem. He presents the subject in a fair and straightforward fashion, reviewing many of the problems which surround the nervous disorders that are, or are alleged to be, the results of accidents and hence compensatable under the Workmen's Compensation Laws. By a correlation of symptomatology and analogy he attempts to classify these cases so that they will be subject both to just compensation and to treatment. Emphasis is laid on both prophylaxis and treatment. The discussion of treatment alone occupies some thirty-six pages of the text.

At the close of the text is a bibliography containing some 250 or 300 references to the current literature. The book should appeal to all of those interested in the enactment and administration of laws governing workmen's compensation and veterans' disability, as well as the neuropsychiatrist whose specialty brings him in frequent contact with cases of this sort.

AMERICAN ILLUSTRATED MEDICAL DICTIONARY (Sixteenth Edition)

A complete dictionary of the terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Nursing, Veterinary Science,

Biology, Medical Biography, etc. By W. A. Newman Dorland, M.D., Member of the Committee on Nomenclature and Classification of Diseases of the American Medical Association. 1,493 pages, 941 illustrations, 279 portraits. W. B. Saunders Company, Philadelphia and London, 1932. Price, flexible and stiff binding, plain, $7.00; thumb index, $7.50.

This sixteenth edition of the American Illustrated Medical Dictionary has been revised and enlarged to include all of the newest words which may be encountered in medical writings. According to the publisher this new edition contains over 3,000 new words. A distinctive feature of this revision is the inclusion of 279 portraits of men who have given their names to the terminology of medicine. These portraits constitute a gallery of the great physicians of the past. The terms proposed by the committee on Nomenclature of the American Bacteriologic Society have been adopted and the organisms are described under their respective names. The terminology of physical therapy has been brought into harmony with the suggestions of the Council on Physical Therapy of the American Medical Association.

It is not only essential that every physician have a medical dictionary, but it is all-important that this dictionary should be a recent edition. It must contain those newer words found in current medical literature, which, because of their recent introduction have not yet come into common use. It is also important that the dictionary considered should be one employing standard and acceptable medical usage. Finally, an acceptable medical dictionary must be one which covers not only the field of medical science, but also those allied sciences whose terminology may have entered the medical field at one point or another. The new American illustrated medical dictionary fulfills all of these requirements and is heartily recommended to the readers of the Journal. The spelling and pronunciation adopted in this dictionary has been accepted as standard for use in the Journal of the Iowa State Medical Society.

CLINICAL ENDOCRINOLOGY OF THE FEMALE

By Charles Mazer, M.D., F.A.C.S., Assistant Professor of Gynecology and Obstetrics, Graduate School of Medicine, University of Pennsylvania; and Leopold Goldstein, M.D., Demonstrator of Obstetrics, Jefferson Medical College. 518 pages with 117 illustrations. W. B. Saunders Company, Philadelphia and London, 1932. Price, $6.00.

During the past decade much intensive study has been directed toward the function of the various organs of internal secretions, particularly those designated as sex organs in both the male and female. This intensive study has borne results, and in the management of these deficiency diseases appropriate glandular therapy has produced good, and in some cases, brilliant results.

The authors of this work have devoted years of study to the problems of glandular secretions, and upon this background have presented a concise, clear and masterful discussion on the problem. Endocrinology in all of its ramifications will be found outlined with much clearness throughout the book, and while the treatise deals especially with those conditions affecting the female, the proved facts of endocrinology in its entirety are presented. That the volume brings this subject up to date is indicated by the inclusion in the text of the newer hormone test for pregnancy, the discussion of ovarian transplantation as a therapeutic measure, and the newer thoughts concerning the endocrine regulation of pregnancy and parturition.

Appreciating the fact that the subject of endocrinology is now in a formative period, the authors have included a reference list to 649 separate articles for the guidance of the advanced student in this subject. The volume is adequately and well illustrated.

INTERNAL MEDICINE

Its Theory and Practice in Contributions by American Authors. Edited by John H. Musser, B.S., M.D., F.A.C.P., Professor of Medicine in The Tulane University of Louisiana School of Medicine; Senior Visiting Physician to the Charity Hospital, New Orleans, Louisiana. Octavo, 1,316 pages, illustrated. Cloth, $10.00, net.

This book is the work of twenty-seven recognized authorities, each of whom holds a professorial appointment in a prominent medical school. Through this arrangement each particular subdivision of internal medicine is covered by an authority in this subdivision, and each writer presents the viewpoint of his experience as a teacher and a clinician, giving the work a most reliable background. Most of the chapters open with a discussion of the general features common to a group of diseases, covering their incidence, their pathology, physiology, and similar data before passing to the detailed discussion of the more specific diseases. Treatment is furnished in sufficient detail to serve as a guide in bedside practice. At the close of each section is a comprehensive, yet compact, bibliography which provides references to current literature where greater study is indicated.

The book provides a full discussion of both the theory and practice of internal medicine, which, because of its increasing complexity and steadily mounting mass of technical facts, frequently escapes the attention of the busy practitioner.

The editor is to be commended upon the arrangement of the material throughout the text. Particularly noteworthy is the summary or outline presented at the opening of each chapter epitomizing the subject matter discussed, a feature which unifies the material presented in the particular section. That the book is authoritative cannot be doubted from a review of the several contributors. Its completeness is in keeping with its size (1,316 pages). The para-

graphic form of presentation renders the volume valuable as a reference work and as a text for students.

The volume is endorsed and recommended, and it is our opinion that it will be recognized immediately as an outstanding textbook in the ever-expanding field of internal medicine.

MEDICAL CLINICS OF NORTH AMERICA

(Philadelphia Number, July, 1932.) Vol. xvi, No. 1 (Issued serially, one number every other month). 290 pages, 75 illustrations. Per Clinic year, July, 1932, to May, 1933—Paper, $12.00; Cloth, $16.00. W. B. Saunders Company, Philadelphia and London, 1932.

This Philadelphia number of the clinics is outstanding in so far as several conditions commonly met in private practice are discussed, and new or unusual signs are presented because of the frequency with which they are unnoticed in diagnoses. One of the most valuable discussions of this sort is entitled "Masked Hyperthyroidism." In this discussion Dr. Wohl presents seven cases as examples of thyrotoxicosis, in which the symptoms of hyperthyroidism were masked by other conditions. In four the heart condition was the confusing element; in one a spastic colitis; and in still another chronic appendicitis and obesity proved to be confusing elements. The discussion emphasizes the importance of a most complete and thorough study of each patient.

The discussion presented by Dr. Martin E. Rehfuss entitled "Chronic Infection" is well worthy of special mention since it presents an experimental inquiry into the role of the streptococcus in the production of chronic infection throughout the body.

The discussion of "Alkalosis and Duodenal Ulcer" should be carefully considered by every physician attempting to treat ulcer by the use of alkalies since timely warning is sounded and exemplified by the careful analysis of the generous experience enjoyed by the essayist.

THE MEDICAL CLINICS OF NORTH AMERICA

New York Number, Vol. xv, Number 5. March, 1932. Published by W. B. Saunders Company, Philadelphia and London.

This volume, which has been prepared by outstanding New York physicians, brings to the reader a group of common, as well as some of the more uncommon medical conditions encountered in the average practice. Presented as they are in the form of clinics, they represent not a theoretical discussion, but a practical consideration of the ailments presented by an actual patient, with a summary and discussion by one eminently qualified for his role.

It is not possible for every physician to leave his practice and sojourn in a medical center for study, and to such a busy physician these medical clinics bring the postgraduate course to him in his own office. The physician who will follow the several volumes appearing annually which constitute this series, will have benefited by the clinical teachings of the outstanding American authorities, and will have done so at an exceedingly low cost.

The present volume maintains the high standard which has been established for this valuable work, permitting the reader access to such clinics as those of Herman O. Mosenthal, E. D. Friedman, and the staff of the departments of neurology and psychiatry at the New York Postgraduate Medical School and Hospital. A most valuable contribution is that made by Dr. Samuel Adams Cohen in his discussion of "Congenital Heart Disease with Special Reference to Its Etiology."

MEDICINE AND THE STATE

The relation between the Private and Official Practice of Medicine, with Special Reference to Public Health. By Sir Arthur Newsholme, K.C.B., M.D., F.R.C.P., with foreword by William H. Welch, M.D., LL.D., London: George Allen & Unwin, Ltd. Baltimore: Williams & Wilkins Co., 1932.

This book is based upon a personal survey of the medical conditions in eighteen European countries, and deals with such vital problems as the costs of medical care, the cooperation of public health officials and private practitioners, and the need of facilitating the private physician's work in preventive as well as curative medicines.

The author concludes that sickness insurance, supported jointly by employers, employees, and the state, is necessary for satisfactory medical care of industrial population. On the subject of costs of medical care, the author's findings agree largely with those of the Committee on the Cost of Medical Care headed by Secretary Ray Lyman Wilbur. Concerning public health work he states, "In every country as civilization advances and the public conscience is aroused, not only is public health work in its limited sense developed, but there is also a corresponding increase in communal efforts towards satisfactory and complete medical care for the sick."

A careful reading of this book forces one to agree with Dr. William Henry Welch of Johns Hopkins University, who states in a foreword that "no discussion of these problems (medicine and the state) can hereafter ignore the facts here collected for the first time and the reviews authoritatively presented."

MINOR SURGERY (Second Edition)

By Frederick Christopher, M.D., F.A.C.S., Assistant Professor of Surgery at the Northwestern University Medical School, Chicago. Foreword by Allen B. Kanavel, M.D., F.A.C.S., Professor of Surgery, Northwestern University Medical School. 998 pages, with 687 illustrations. W. B. Saunders Company, Philadelphia and London, 1932. Price, $10.00.

Every physician, regardless of his specialty or the scope of his practice, is required to perform a certain amount of minor or emergency surgery, and for

this reason every physician should be prepared for this task. This volume, which orginally appeared in 1929, required reprinting in January and again in June of 1930. It appears now entirely reset and reprinted with much new material added and the entire text revised. These facts bespeak the hearty reception given the volume—a reception which is justly merited since it is quite unique in its field.

The importance of a knowledge of minor surgery cannot be too much stressed in this machine age when industrial and motor accidents constitute well over fifty per cent of all cases seen by the surgeon. It is of further importance that in the average medical curriculum little or no attention is given to minor surgery. The entire time allowed for surgical study is devoted to major surgical procedure. To overcome this deficiency, the hospital interne or the young practitioner requires a trustworthy text on this subject, and to them and the industrial surgeon this volume will have an especial appeal. To the general practitioner the volume should become a desk companion.

MINOR SURGERY OF THE URINARY TRACT

By Hermon C. Bumpus, Jr., Ph.B., M.D., M.S. in Urology, F.A.C.S., Section on Urology, the Mayo Clinic; and Associate Professor of Urology, the Mayo Foundation. With a Chapter on Caruncles by John L. Crenshaw, M.D., Section on Urology, the Mayo Clinic; and Associate Professor of Urology, the Mayo Foundation; and a Chapter on Postoperative Care by Anson L. Clark, M.E., M.D., Section on Urology, the Mayo Clinic, Rochester, Minnesota. Octavo of 124 pages with 57 illustrations. Philadelphia and London. W. B. Saunders Company, 1932. Cloth, $3.00 net.

This little book including bibliography and index is complete in 124 pages. It is packed with a tremendous amount of practical information for the general practitioner and especially for those who have had limited experience in this field. The author has enlisted the efforts of two of his associates in the compilation of material—Crenshaw on urethral caruncles and Clark on postoperative treatment and the ketogenic diet as employed in urinary infections.

The author's technic of transurethral prostatic resection is described in detail, yet clearly and in a brief manner. Brevity is an outstanding characteristic throughout the entire volume thereby enhancing its value. The author cautions repeatedly that minor surgical conditions can be easily transformed into those of grave and major significance. Many who have employed the various manipulative aids in the removal of ureteral stone can testify to this fact. He rightly places a premium on efficiency and the fact that knowledge of what might be expected in the way of complications is essential.

All members of the medical profession who combat genito-urinary disorders in either sex would do well to possess a copy of this little volume. It is apparent that it will serve as a guide or manual and be useful for immediate reference. For these reasons subsequent editions are predicted to appear. W. R. H.

ORTHOPEDICS IN CHILDHOOD

By William L. Sneed, M.D., Attending Surgeon, Hospital for the Relief of the Ruptured and Crippled, etc. (Everyday Practice Series, Edited by Harlow Brooks, M.D.) 318 pages, 145 illustrations. J. B. Lippincott Company, Philadelphia and London, 1931. Price, $5.00.

Appreciating the fact that the recognition and diagnosis of deformities and deviations from the normal must be made in early childhood if serious conditions are to be prevented, and the abnormality corrected, the author of this volume has attempted to present approved methods of diagnosis and treatment in the care of these conditions. He purposely stresses the simplest methods of treatment, omitting from discussion those forms of treatment requiring complicated surgery, since he constantly keeps before him the needs of the pediatrician, and the general practitioner rather than the specialist in orthopedic surgery.

In presenting the individual's condition he studies (1) history, (2) inspection, (3) a thorough physical examination with measurements, (4) consideration of the treatment to be instituted, and (5) brief outline of treatment. He discusses successively the foot, the knee and the leg, the hip, the pelvis, the spine, the upper extremities, the hand, contractures and chronic infectious arthritis.

The volume will prove of especial interest to the pediatrician and general practitioner.

PATHOLOGY FOR NURSES

By Eugene G. Piette, M.D. 251 pages, with 65 illustrations. F. A. Davis Company, Philadelphia, 1932. Price, $1.75.

To condense into small compass a survey of an extensive branch of medical science such as pathology, requires great skill. Only fifteen hours are allowed by the National League of Nursing Education to train nurses in pathology. The author of this text has appreciated his problem, and has here presented the most important cardinal fundamentals of pathology in an authoritative and yet interesting fashion.

The author is to be commended upon his choice of materials, his paragraphic style of presentation, and the numerous good illustrations which are scattered throughout the work. At the close of each chapter is a suggested list of questions which will serve the nurse well in quickly reviewing the essentials of the chapter. The book appears to be well written for the purpose intended.

THE PRACTICAL MEDICINE SERIES

General Medicine. Edited by George H. Weaver, M.D., Lawrason Brown, M.D., George R. Minot, M.D., S.D., William B. Catle, M.D., William D. Stroud, M.D., Ralph C. Brown, M.D. Series 1932. 837 pages. The Year Book Publishers, Inc., Chicago, 1932. Price, $3.00.

There are very few physicians in the general practice of medicine who can devote the necessary time to keep abreast the tremendous and ever increasing literature on this subject. For this reason it becomes necessary that those of us who would be informed in the general field of medicine secure this information either from attendance at a well directed clinic or that we conduct a systematic study from summaries or condensations of the year's developments. The latter course is more frequently employed, for obvious reasons.

To meet this demand the Year Book Publishers have for many years presented able condensations both in the field of general medicine and in the various specialties. These condensations have been prepared by outstanding and eminent authorities, who because of teaching connections or associations with large clinics, are required to keep in very intimate touch with the current literature. This background gives the Year Book condensation the desired assurance of authority.

The editorial comments scattered throughout the volume add materially to the value of the text since it presents a critical clinical appreciation or interpretation of the subject discussed. This volume maintains the high standard which has characterized these publications throughout the years of their existence.

THE PRACTICAL MEDICINE SERIES

Dermatology and Syphilis, Edited by Fred Wise, M.D., Professor of Dermatology and Syphilology, New York Post-Graduate Medical School and Hospital of Columbia University, and Marion B. Sulzberger, M.D., Associate in Dermatology and Syphilology. Urology, Edited by John H. Cunningham, M.D., Associate in Genito-Urinary Surgery, Harvard University Post-Graduate School of Medicine. Series of 1931. The Year Book Publishers, Inc., Chicago. Price, $2.25.

This volume of 458 pages is actually a condensed medical encyclopedia, subdivided into two main divisions—the first devoted to dermatology and syphilis, the latter half to the field of urology. It is apparent after prolonged study that the authors have accomplished their purpose satisfactorily. The clinical material represents data gleaned here and abroad and is shown in case presentation, where possible. An added touch of interest and value is injected by occasional personal impressions of the authors either in the nature of commendation or criticism. J. Darier in his review of eczema claims that it is a form of allergic disease and is applied to a collection of widely separated cutaneous affections. The author aptly comments on this article in recognizing one of the world's living masters of dermatology by saying that one of our greatest difficulties which retards advance is in the confusions of terminology. During the past year observers on the treatment of late syphilis have noted specific curative properties in ultraviolet and controlled injections of autogenous blood.

A noticeable spirit of conservatism is exhibited by Cunningham in his compilation of the year's progress in urology. No cognizance is given to the revival of the old principle of removing obstructing segments of the prostate by new and improved tools by way of the urethral canal. The view of the general surgeon is retained in this respect. It is believed that more emphasis should be placed on the value of neutral acriflavine solution as an antiseptic par excellence in local treatment of uncomplicated gonococcal infections. The author still shows a preference for potassium permanganate. A very important and enlightening observation is made by Barrington and Wright in the prevention of chills and systemic reaction in urinary infections by the use of preliminary irrigations before instruments are used. Bacterial invasions of the blood stream are thereby prevented.

For the general practitioner this volume should prove of inestimable value if the subject matter is approached by way of the index which is compiled by subject material as well as alphabetically by authors.

PSYLLIUM SEED: THE LATEST LAXATIVE

By Dr. J. F. Montague, Medical Director Montague Hospital for Intestinal Ailments. 170 pages with 20 illustrations. Montague Hospital for Intestinal Ailments, New York City, 1932.

This is a delightfully written treatise on psyllium. While it is intended for enlightenment of the public, it is of distinct value to the physician as well. It contains detailed botanical studies of the entire Plantago family; physical, chemical and pharmaceutical properties of each species; the comparative merits of psyllium seeds and a few other laxatives; the author's own clinical experience supplemented by case reports, and some very interesting facts disclosing the importance of psyllium seed as a drug commodity in the world markets.

Dr. Montague does not proclaim psyllium seed the "ideal laxative." He recommends it for the victim of uncomplicated constipation with timely admonitions against its usage in cases not suitable, against its improper administration when indicated, and against self medication with any laxative whatsoever by the layman.

The author has written this book in his usual pleasing style from a complete and detailed knowledge of the subject. C. A. S.

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THE BLOOD PICTURE AND CERTAIN RELATED CLINICAL IMPLICATIONS*

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The blood picture has steadily attained a position of increasing usefulness in clinical medicine. It is not too much to say that recent developments in hematology have tended to add that desirable quality of depth to the picture, as well as to increase its length and breadth. As an illustration of this thought, the following introductory sentence in Schilling's popular book serves admirably: "No one who masters the technic of blood examination will ever forget the feeling of quietude, which a favorable blood picture of an apparently severe disease gives him; and no one knowingly would care to overlook the serious hint of a severe blood picture in euphorial conditions, or after too short a time of observation."[1]

In a general way, and for practical purposes, the value of microscopic examinations of the blood may be grouped into three classifications: first, as a means of ultimate and decisive diagnosis, limited to the finding of etiologic parasites, notably the P. malaria and certain trypanosomes; second, as a means of probable diagnosis, and limited to the type and degree of activity within the hematopoietic system; and third, as a direct reflection of pathologic processes in various tissues, chiefly those processes of infectious and toxic origin. However, in this paper, only those concepts of the blood picture in relation to hematopoietic disorders and infectious processes will be considered. Very little stress will be placed on technic, but the various methods of securing information will be enumerated; the source and types of circulating blood cells will be discussed; and finally, whatever practical deductions accrue from correlating blood cell pathology with clinical symptoms, will be presented.

The fundamental basis for the interpretation of any particular blood picture is an understanding of the normal mechanism of origin, maturation, delivery, and distribution of the circulating cellular elements.[2] The continuous production of red cells, white cells, and blood platelets on a replacement basis, the removal of worn out cells from the circulation, and the maintenance from hour to hour of uniform physiologic norms is a complicated process. Disorders may arise at any point; yet, there are more vulnerable zones in hematopoiesis where the specific action of depressant effects, or of stimulatory agents are likely to become manifest.

METHODS

Passing quickly over the well known methods of enumerating blood cells and platelets, we come to the preparation of blood films for differential counting by the use either of coverslips or slides. (Each method has advantages and faults, although slides are much more widely used.) Coverslip spreads of blood give a more even distribution of the large and small cells, yet the trauma incident to pulling the slips may rupture and distort the more fragile cells. On the other hand, the various slide methods are open to the criticism of uneven distribution.

Since Ehrlich's differentiation of the white cells in 1898, many staining methods have been advocated for various purposes. The Romanowsky stains permit the best analysis of nuclear characteristics, when counterstained with Giemsa (Furth). The methylene-blue-azure dye combinations reveal variations in the degree of basophilia shown by individual cells, which is a criterion of relative immaturity, and consequently of great practical importance.[2 and 3]

Another method of differentiating blood cell types is by the application of the peroxidase reaction. Its use is based on the principle that a study of the oxidizing ferments of leukocytes aids in distinguishing those of myeloblastic origin from those of other lineage. Of the mature white cells only the lymphocytes and clasmatocytes remain negative. Myelocytes react quantitatively in proportion to the number of specific granules present

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(indicating their transitory age). Normal adult polynuclear neutrophiles are filled with large black granules. Myeloblasts and lymphoblasts never show peroxidase granules, so that their differentiation by this stain is no more possible than by any other. Sato and Sekiya,[4] using copper sulphate in the peroxidase stain, have demonstrated a negative reaction in the myeloid leukocytes in epidemic encephalitis, and consider it as having diagnostic importance.

Within the past ten years the methods of vital and supravital staining of tissue introduced by Florence Sabin[5] have added greatly to our knowledge of the types and functions of blood and connective tissue cells. Intra vitam studies with relatively non-toxic dyes, such as trypan blue and lithium carmine, have aided in the differentiation of phagocytes originating in the reticulo-endothelial system.[6] By this means also the identity of the macrophage (clasmatocyte) and the monocyte has been confirmed.

One of the most valuable methods of blood cell analysis lies in the application of vital neutral red and Janus green, in physiologic concentrations, to living cells withdrawn from the circulation and examined immediately at body temperature.[7 and 8] Motility of the cells may be observed, mitochondrial reactions, reticulocytes and differentiation within the three groups of granulocytes are visualized. In fact, new cytoplasmic criteria are available for the classification of cells. These preparations lack permanence, however, and there is a blurring of the nuclear structures.[2]

Additional data in blood cell analysis have been furnished by a study of the survival of the individual cell.[9] Methods of tissue culture have been applied to blood cells.[10] Observations through "windows" constructed in the rabbit's ear have been helpful in understanding the physiology and functions of blood cells.[11] The examination of the living blood in the dark field may be of value in selected cases. The recent introduction of the ultraviolet microscope, and polarization studies applied to the blood of cancer patients may be the means of exploring a new field.[12]

In brief, our knowledge concerning hematology has advanced rapidly within the past decade. It is a field which still enlists the painstaking labors of several groups of anatomists and clinicians. On the part of the latter, practice in technic and discrimination in the collection of data are essential to interpretation of results.

It should never be forgotten that an abnormal blood picture is an index of certain body reactions to insult. In the case of infectious processes, the blood picture is an index of tissue resistance to bacterial invasion and growth. In the other instance to be considered in this paper, that is, altered hematopoiesis, the blood picture is a reflection of abnormal blood cell formation, maturation, delivery to the circulation, and/or distribution. In either case, it is essential to consider first the source of blood cells.

ULTIMATE SOURCES OF BLOOD CELLS

The review of this controversial question has been a matter of no little interest to the writer. So earnest and convincing have been the data and arguments of the unitarians, the dualists, and more recently the trialists, that one finds himself swayed first one way by the defenders of one view, and then another way by equally enthusiastic proponents of another view. Without attempting to weigh the merits of these different schools of thought, it is, nevertheless, important for practical purposes, to have in mind a basis for discussion. The trend of opinion seems to be that, for practical application and from a standpoint of its utility in a clinical way, peripheral blood cells may be regarded as being polyphyletic;[2] and that the bone-marrow, lymph nodes, disseminated lymphoid tissue, spleen, and connective tissue, each and all have a hematopoietic function. It is also noteworthy that an analysis of the life cycle of blood cells has, for practical purposes at least, clarified much of the academic discussion regarding origin and function of blood cells, thereby resolving isolated observations into useful data.

In the human fetus, the formation of blood cells begins in the body stalk and more general connective tissues; the process then passes to the liver; thence to the spleen; and at birth, the bone-marrow begins to function. In the adult, it is well known that the formation of red cells and granulocytes may be shifted to the spleen and liver. Under more extreme circumstances, it may revert to the connective tissues by definite marrow-like nodules. All these phenomena represent a reversion to an earlier fetal state of hematopoiesis. The vestiges of the primitive mesenchyme, long dormant in various tissues and organs, may again function in a purposeful way.[2] (Parenthetically, one may speculate on the potentialities of these same misplaced cell inclusions to resume growth under certain abnormal circumstances, and function without end or aim resulting in neoplasia.)

BONE-MARROW AS A BLOOD FORMING ORGAN

At the risk, therefore, of seeming to be somewhat dogmatic, the origin of blood cells, for the purpose in hand, will be considered chiefly from a utilitarian standpoint. The bone-marrow is the

principal source of blood cells during postuterine life. When conceived of as a hematopoietic unit, the volume of adult human marrow is about 1400 c.c.,[13] nearly equal in amount to the liver, and thirteen times that of the spleen. As is the case of other organs, this quantity far exceeds actual requirements for normal physiologic functions and consequently there is a large reserve potentially available. Unlike other organs, made up of mature differentiated cells adapted for their particular function, the specific blood cells in marrow continue throughout life to arise from a primitive stem cell and mature to the definitive cell type.[2] Thus, the bone-marrow reserve consists not only of a limited number of normoblasts and myelocytes (red marrow) ready for delivery, but also a potential vascular bed of endothelial cells and primitive mesenchymal cells from which blood cells may be generated (yellow or fatty marrow). The proportion of red to yellow marrow varies with the age of the individual, from a uniform pink marrow at birth to the appearance of a yellow patch in the middle of the femur between the ages of twelve and fourteen. In the adult, the red marrow has practically disappeared from the long bones, and is confined to the ribs, vertebrae, sternum, skull, and os innominatum.[14] (The centers of the tibia and sternum are best suited to human biopsy studies.)

There is a reciprocal relationship between the red and yellow marrow, which is very sensitive to the demand for new blood cells required to maintain necessary oxidation processes for a short time. The deposition of fat in the cavity of a long bone may be replaced by a gelatinous matrix in which the generation of blood cells may be observed, and likewise when the hyperplasia recedes, there is a prompt return to aplastic (fatty) marrow. This marked lability is nature's way of providing the necessary speed and efficiency in responding to abnormal demands, and has only recently been appreciated.[15] When there is complete replacement of fat in all long bones, and an unbalanced equilibrium still remains between supply and demand, then there may be resorption of bone to enlarge the marrow cavities. The last resort in an effort to supply excessive demand for oxidation units is the ectopic formation of blood in the liver, spleen, and elsewhere.[16]

ORIGIN OF RED CELLS

The anatomy and physiology of the bone-marrow and the generation of blood cells is a story in itself. Briefly, the majority of recent studies as summarized by Sabin[13] point to a closed circulation with an intact vascular endothelium throughout the bone-marrow; and further show that red cells are formed within, while white blood cells are formed outside, the vascular bed. In the generation of red cells, the first thing noted is an increase in the size and number of endothelial cells lining the collapsed capillaries. As a result of mitosis of this cell, there appears within the vessel the earliest hemoglobin containing unit, namely, the megaloblast. This is the stem cell for the erythrocyte in the human adult. (It should be pointed out that its genealogy is a controversial question.) The development of the megaloblast into the normoblast is accompanied by an increase of hemoglobin and a decrease of basophilic substance and mitochondria. Normally, about 70 per cent of all developing red cells in the bone-marrow are in the normoblastic stage, ready for final maturation and delivery into the blood stream. The normal reservoir of enucleated red cells is in the spleen, from which the normal demands of exercise or chemical stimulation may be supplied.[17]

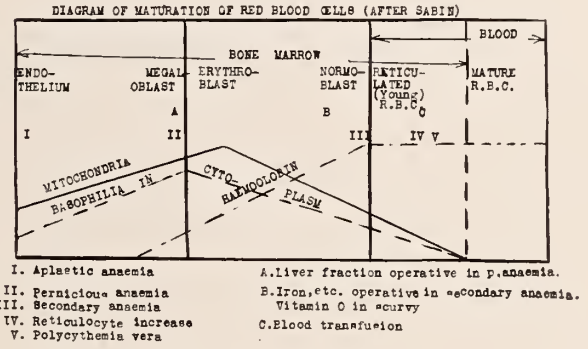


Diagram No. I.

ORIGIN OF GRANULOCYTES

It is generally believed that the granulycotes arise outside blood vessels and pass into them by their own motility. Their ultimate source (progenitor) is still a moot question.[18 and 19] According to one concept, there is a common primitive cell for the red and all white strains, a polyvalent stem cell. Approaching the matter from a standpoint of the life cycle of the cell, a more practical conception for the clinical interpretation of changes is afforded. In completely aplastic adult marrow, only three types of cells are found: fat, endothelium, and reticulum.[20] Of the three, fat is but accessory to blood formation. If red cells are generated intravascularly from the endothelium, then the reticulum alone is left as a source of the granulocytes.[2] These reticular cells are present along the reticular framework of the marrow and between the fat cells. They begin to show mitoses shortly after the hypertrophic and hyperplastic changes, which precede the megaloblasts in regenerating marrow. The reticular

primitive free cell gradually elaborates mitochondria and builds up a basophilic cytoplasm to a maximum which is reached just prior to the appearance of the first specific granules.[21] This is the cell which is the myeloblast of myeloblastic leukemia. It lacks specific granules and consequently remains negative to the oxidase reaction. In the normal maturation of this primitive free cell, granules appear and increase as the basophilia and mitochondria decrease[2] just as hemoglobin increases in the red cell as mitochondria and basophilia decrease. (The reference above to myeloblastic leukemia is an example of one of the hematopoietic diseases becoming manifest at one of the vulnerable zones referred to early in the paper, and further illustrates the utilitarian aspect of the polyphyletic theory of blood cell production.)

Myelocytes may get into the peripheral circulation at any stage in their transition from the appearance of one or two specific granules up to the point of having a full complement of granules. Many and diverse names have been given to these cells, and the result is confusion. A simple solution[2] has been to make three arbitrary classifications based on the amount of granulation, and simply label them myelocyte A with one or two specific granules: myelocyte B with anything up to the full number of granules; and myelocyte C, representing the stage at which normal granulocytes are found in normal marrow. At this stage the cell has shown no motility of granules or cytoplasm, and has remained a part of a growing focus of myeloid cells originating in reticular connective tissue cells. There comes now a change in the myelocyte involving the nucleus, cytoplasm, and specific granules. The round or oval nucleus becomes indented, the cytoplasm becomes more fluid, permitting the granules to move about within the cell, but as yet, no mass movement has occurred to form pseudopodia or progression. There is a striking change in the granules at this point, and the cell is known as the metamyelocyte, the first immature cell to appear in the circulation under duress.[2] A deeper induration of the nucleus precedes the development of polymorphism, which together with ameboid motility, characterizes the mature circulating leukocyte. Arneth[22] pointed out the number of lobes in the nucleus as indicating the relative age of the circulating neutrophilic leukocytes. The last phase in the life cycle of the granulocyte is the non-motile, multilobed, swollen cell, with granules which no longer stain supravitally in neutral red, and with a cell membrane which is easily ruptured in making fixed films. Schilling's[23] staff and juvenile forms are early or young leukocytes.

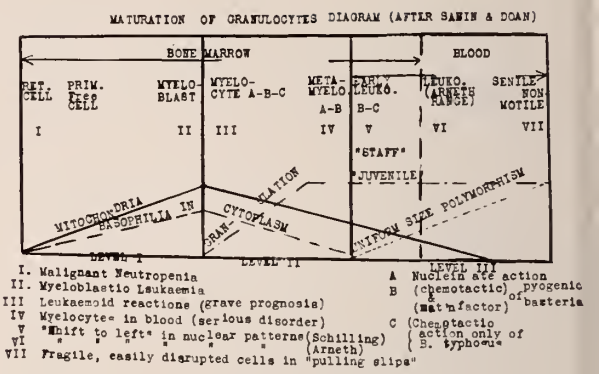


Diagram No. II.

ORIGIN OF PLATELETS

A third antecedent of circulating blood elements found in the marrow is the megacaryocyte, which is related to blood platelet formation (Wright). Here again it has been possible to utilize and apply our knowledge of certain blood dyscrasias to a better understanding of platelet generation and function. Indirect evidence of this origin has been drawn from the relationship of platelets to megacaryocytes in leukemia. It is well known that in primary idiopathic purpura there is not only a decrease in the number of platelets, but fully as marked variations in size and shape of these cytoplasmic bodies as are found in the red cells in anemia.[2] That something still more fundamental underlies this (idiopathic) hemorrhagic diathesis is suggested by Thompson's[24] recent report on his ability to increase blood platelets with irradiated egosterol without influencing the clinical course of the disease.

The writer has been interested in the clinical trial of an extract of blood platelets (coagulen, Ciba) in two cases of idiopathic purpura. It has been possible to demonstrate a decreased bleeding time in both instances, without, however, any manifest change in the clinical course of the disease. In a recently observed case of symptomatic purpura, arising as a complication of aplastic anemia, it has been possible to demonstrate repeatedly the prompt effect of whole blood transfusion on the hemorrhagic tendency. Apparently the survival of the transfused platelets was less than that of the transfused red and white cells, as estimated directly by enumeration, and clinically by a recurrence of hemorrhages from the mucosae. Platelet regeneration is the most susceptible of any of the marrow functions to mechanical and chemical influences.

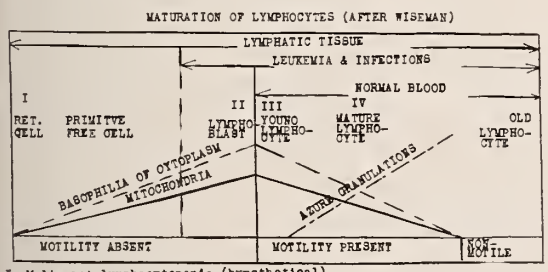
In brief, the bone-marrow is the physiologic source, in post fetal life, of the red cells, granulocytes, blood platelets, and to a limited extent of certain desquamated epithelial cells or clasmato-

cytes. The latter seem to be indentical in structure and function with the same type of cell arising in the spleen and Kupffer cells of the liver.

ORIGIN OF LYMPHOCYTES

The lymphocytes arise in the lymph nodes and diffuse lymphoid tissue throughout the body and are, for the most part, delivered into the blood stream by way of the thoracic duct.[2] It is possible that some lymphocytes get into the circulation directly through the vascular bed of the lymph node.[25] The mature lymphocyte shows a characteristic clumsy motility centered in the nucleus, without forming pseudopodia.[26]

Until recently, the identity and function of the lymphocyte has been rather obscure. The studies of Weisman[27] published in 1931 are very significant. On the basis of certain criteria (basophilia and mitochondria) established for estimating the relative growth and maturity in other strains of blood cells, he has identified a similar cycle for the lymphocyte. Beginning with the fixed reticulum and primitive free cell found in connective tissue and bone-marrow, the maturation from lymphoblast to old degenerating lymphocyte has been traced. Under physiologic conditions Weisman found the total lymphocytes to number approximately 2,000 per cu. mm. of which five per cent are young forms, fifty per cent are mature, and forty-five per cent are older forms.[27] The cell size varies greatly with the technic employed. The percentage of young forms in the peripheral circulation may be increased by various forms of lymph node irritation, conforming in behavior to specific stimuli of other strains of blood cells.[27]



I. Malignant lymphocytopenia (hypothetical)
II. Lymphoblastic leukaemia
III. Comparable to myelocytic stage in granulocytes
IV Shift to left of lymphocyte (azure granulations) pertussis

Diagram No. III.

ORIGIN OF MONOCYTES

The monocyte of the blood is a cell in type distinctive from the granulocyte and the lymphocyte. It was first considered in the Ehrlich classification as a transitional form in the maturation of the neutrophilic leukocyte. The Romanowsky methylene-blue-azure staining technic corrected this view,[28] but tended to link the monocyte with the lymphocyte, until it was seen that the azure granules of the lymphocyte are large, few in number, and imbedded in a clear protoplasm, while the azurophilic granules of the monocyte are tiny and extremely numerous, and lie in a muddy blue background.[2]

Although the origin of the monocyte is, at this time, a matter of question, it is most helpful to consider its life cycle in terms of origin and maturation. It is not difficult to apply the formula of myelopoiesis and lymphocytopoiesis to monocytes. A fixed reticular cell, and a primitive free cell precede the differentiation of the monoblast. Basophilia present in the monoblast, seems to remain throughout maturation; but, true to form, mitochondria tend to disappear with maturity. Unlike other cells, monocytes retain the power of division in the circulation. Under normal conditions between 600 and 900 monocytes are found per cu. mm. in the adult human, with one to two per cent young forms. A case observed by Doan,[2] in which the total white count ranged from 18,000 to 30,000, had from sixty to eighty per cent monocytes, the majority of which were distinctly young cells. The number of granulocytes and lymphocytes remained within normal limits (although showing a "left shift" of younger forms) so that the entire increase was due to monocytes. This illustrates again the independence of the controlling mechanisms for each type of blood cell. In fact, it was possible to demonstrate periodic fluctuations of the number of monocytes.

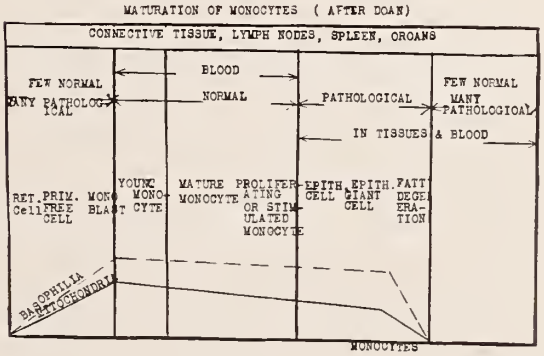


Diagram No. IV.

To summarize at this point: new hematologic methods have prepared the way for differentiating and identifying individual cells. At the same time, the application of a formula to the study of the life cycles of different cells has not only made it possible to hurdle many controversial stumbling blocks but has, as we shall see, prepared the way

for the practical usage and codification, as it were, of otherwise meaningless data.

(To be concluded next month)

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THE FUTURE OF MEDICAL PRACTICE*

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The adoption of the microscope by medical colleges coincide with the time of my entrance into the study of medicine. Since then, the time devoted to the use of the microscope and to a study of various laboratory methods has gradually increased until now more than half of the student's time is absorbed in acquiring the technic of laboratory procedures. The time is not far distant when much of this drudgery and technical detail will be turned over to technicians and the student will be allowed to devote most of his attention to a more careful study of the symptoms of diseases.

MacKenzie, who taught us many of the important things known about the heart, had little laboratory training and used principally one instrument, the polygraph. He practiced in the small town of Burnley, Scotland, and in common with most of the members of this society, conducted a general practice. As distinguished from the rank and file of his contemporaries, he was an independent thinker. It was at the age of fifty-five, when he attracted considerable attention by his revolutionary ideas of heart disease, that he removed to London. Up to that time students had devoted weeks and months in learning to detect the different murmurs of the heart. MacKenzie demonstrated that it was more important to know how the heart reacts to the work it has to do in the usual vocations of life.

His removal to London came at a period of life when most men are arranging to retire. His first year in London was devoted largely to writing his book on The Diseases of the Heart. It startled the medical world, and he soon became the outstanding heart specialist. Wards in the London Hospital were placed at his disposal. Transplantation at the age of fifty-five often stops growth, but this was not so with MacKenzie. With irrepressible energy and enthusiasm he soon attracted to himself the stimulating influence of younger men. His ripened experience and clear vision, based on thirty-five years of general practice, placed him on a pinnacle far above men who began specializing in early life. He was knighted by the King and although he acquired all the world's wealth that he desired, he was still restless and dissatisfied. He considered the profession in London superficial and repeatedly remarked on the opportunities offered the country doctor to study disease in its incipiency. His dream was to create an organization to study the early

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symptoms of other diseases as he had studied the heart. Unfolding his ideas to a brother Scot, Andrew Carnegie, he was assured of financial support.

In a letter which he wrote the day before he died he said, "When I left London I dared not tell anyone the real reason of my leaving for it would have been looked upon as a piece of folly. For years I had been gradually becoming convinced that the whole tendency of research was on wrong lines. It was devoid of fundamental principles, was haphazard and could not supply the kind of knowledge which would enable us to solve medical problems. It was with the object of searching for this principle that I undertook at the age of sixty-five the burden and responsibility, which were very heavy, of starting an institute for the purpose of this quest. So it came about that the James MacKenzie Institute for clinical research was founded in St. Andrews."

Quoting A. Maitland Ramsey, in the Third Annual Report, of the St. Andrews Institute for Clinical Research: "Clinical Medicine fails when it deals with the results of disease rather than the causes which produce it, and MacKenzie contended that the only person who could study the symptoms of disease efficiently in its incipiency is the general practitioner." Some may consider that the daily routine of the family doctor, the treadmill of general practice, is not compatible with research in medicine, but MacKenzie himself laid the foundation of his original investigations on the action of the heart while he was a busy general practitioner in Burnley, and everyone must admit the far-reaching results of the observations he made at that time. There are many who believe that the secret of progress in medicine is only to be found in the laboratory and choose that walk in life rather than engaging in general practice because they consider the former to be the correct way to study medicine scientifically. The scientific method, however, cannot be considered as the exclusive property of the laboratory worker. It belongs to the individual and whoever is possessed of the true scientific spirit can bring it to bear on the solution of any problem with which he is confronted in the course of his daily work. In that sense every general practitioner can be a research student and the family doctor ought to train himself to employ scientific methods at the bedside in the same masterly manner that they are used by the worker in the laboratory.

Clinical medicine in the past has been so much a matter of personal skill and experience that when the clinician dies his work dies with him. There can be no doubt that skill in diagnosis, and more especially in prognosis, must always be largely a matter of individual experience, but if such valuable knowledge gained during a studious lifetime is not to be lost when he who accumulates it dies, some means must be found to provide a foundation on which future investigators may build. What MacKenzie did in general practice and what is now being done by the St. Andrews Institute can be emulated in every county in the state of Iowa. MacKenzie was undoubtedly right when he said that the family physician is in the best position to detect the beginning of disease. He is familiar with the family history, and this is of great importance. Many of the members of this society have often come intimately in contact with four generations, and occasionally with five generations of certain families.

There is no question among those who have carefully looked into the matter that disease is passed on from generation to generation in accordance with fixed laws formulated by Mendel. When an interne reads a case report and says that the family history is unimportant, it is evident at once that he has made a very superficial investigation, or is ignorant of the importance of heredity in disease. If complete records were kept of each individual born in the county, with a history of every illness from which he has suffered we would, in a few generations, be in a position to predict the early pathologic changes which would be most likely to appear in that individual. Then the general practitioner would be in a position to practice preventive medicine on a larger scale than is possible at present under existing conditions.

With the county hospital as a center the practitioners in each county could organize themselves into a clinic after the manner of the St. Andrews Institute for Medical Research. Each man, while being in general practice, could take over a specialty, perhaps the one most to his liking. Patients would then be able to consult a specialist during the earliest stages of disease when it is most important to have an expert's opinion. If the public desires the best medical service at the lowest cost then let a place be provided where the best work can be accomplished. At the present time each doctor is duplicating, in many instances, what his next-door neighbor has in library, instruments, electrical appliances, x-ray equipment, and so on, and yet is unable to have the best. It is the duty of the profession to convince the public that the county hospital is a most necessary public utility. If this obligation is not fulfilled the members of this society will, by continuing along the present trend, become sign posts pointing to the city hospital. Some say that this will lead to state medicine. You may answer truthfully that state medi-

cine has already arrived, but I am of the opinion that it will increase unless the profession creates organizations which will give service superior to that given at the present time.

In five years patients requiring surgical or medical attention which we are not prepared to give will be placed in an ambulance plane and within two or three hours will be in a hospital at Iowa City or Rochester. This is a progressive age and people are being rapidly and universally educated by the daily paper, consolidated schools, junior colleges and universities. The motion picture and the radio are more modern means which are used for conveying information to the public. The people are demanding service that can be given only through organization and cooperation. Much is being written about the rotten spots in the profession. The abortionist is being driven to cover. Leading magazines and daily papers are informing the public about unnecessary operations and fee splitting. Let us organize ourselves around the county hospital as a unit, take advantage of the facilities offered by better equipment, closer cooperation and a measure of specialization which will enable us to render to the sick a service superior to that which is possible under present conditions.

FEEDING PROBLEMS

PYLORIC STENOSIS IN INFANCY; ANOREXIA IN THE TOTTLER; MALNUTRITION IN THE SCHOOL CHILD*

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PYLORIC STENOSIS

When an unsatisfactory gain or a loss in weight in a young infant is associated with vomiting as the cardinal symptom, the physician should make an immediate study of the patient to determine whether he is dealing with pyloric stenosis or whether the symptoms are due to other causes. The age and diet at the onset of symptoms become valuable data. If the food has been too strong or the feedings too voluminous, a type of recurrent vomiting may be encountered which may somewhat simulate true pyloric stenosis. It subsides, however, within a week or two after the dietary error has been corrected. Whether repeated overdistension or continued overstretching of the neonatal stomach can cause pylorospasm which, in turn, may lead to hypertrophy of the muscularis and thus become an etiologic factor in true pyloric stenosis, has never been determined. It is well known, however, that the spasm element rather than the tumor itself may, in many instances, be the decisive factor which determines the success or failure of dietary treatment.

The vomiting in true pyloric stenosis is not always projectile, nor does every infant with projectile vomiting have a tumor, but every infant with pyloric stenosis has projectile vomiting. It may occur once or numerous times a day. The vomitus may be mainly food or mucus. The odor is usually pungent if the stomach is already dilated, and if there is gastric retention. Occasional flakes of brown or streaks of red blood may be seen, but the vomitus is never bile-stained. Rich breast milk may have a deep yellow color and if vomited may be misleading.

Palpation of the tumor is more likely successful if the infant is emaciated and dehydrated, i. e., if the abdominal wall is thin and elastic. If the condition has persisted for weeks the very hypertrophy itself may have acquired sufficient size. The best time to palpate is soon after an explosive emptying when the patient is usually relaxed. An index finger is more reliable than the hand. Experience is the best teacher. The exact location from the navel should be made a matter of record so that the surgeon may be guided thereby if operation should become necessary.

The presence of visible peristaltic waves, more properly called gastric hyperperistalses, best seen after a copious nursing or feeding, clinch the diagnosis. The source of illumination should be at the left of the patient and sufficient time should be spent to insure a shadow cast to the rignt by the migrating waves. This succession of more or less rhythmic contractions of the ventral wall of the stomach is characteristic when their origin is below the left costal arch and when they move, in a more or less diagonal course, to the right of the mid-line in the epigastric region.

The weight-curve of infants with pyloric stenosis has some prognostic value. The birth weight is usually regained within two weeks and the weekly gain may be satisfactory until vomiting begins. The onset is seldom gradual. Not infrequently it occurs so suddenly that the spasm element seems to dominate the picture. The weight may remain stationary for days, but as more and more food is lost, the weight decreases. Its rapidity and degree are dependent upon the amount of food vomited. This, in turn, is determined by the degree of obstruction of the pyloric lumen. If the sudden and severe cases are immediately operated upon there may be relatively little hypertrophy found.

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The amount of fecal matter each twenty-four hours serves as a reliable prognostic barometer. If stools are absent, infrequent or very scant, and if the weight continues to decrease, in spite of dietary changes, therapeutic and hydrotherapeutic measures, surgical intervention should not be long delayed.

When a definite diagnosis of hypertrophic pyloric stenosis has been made, the parents should be appraised of the fact that the infant has an obstruction at the outlet of the stomach; that certain measures will be tried, and the patient carefully watched; that if the condition gets worse in spite of this, or if improvement is too long delayed, an operation will be necessary. They should be told that the condition is more or less serious, and that a certain element of danger is present, regardless of the course pursued.

No one can predict which patient will respond to dietary regimen, and which will require the knife. Even the patient who, when first seen, has already become very depleted, should not be rushed into an operation. Hydration (six per cent dextrose Ringer's or normal salt) of 100 c.c. or more under the skin every twelve hours for a day or two, and 75 c.c. of blood intramuscularly, will improve the patient's chances of recovery. Such patients, those seen earlier in the disease, and those in the pylorospasm stage should be given the opportunity of dietary measures. If no benefit is noted, it may then be necessary to resort to surgery.

If the infant is on the breast, both breasts should be expressed with the electric pump or manually three or four times in twenty-four hours. Not only is the consistency and concentration of the food important, but the volume of each feeding is probably of greater significance. The food should be smooth, like thick, whipped cream, when served. Besides having a high caloric value, it should be quite readily digestible. It may be made as follows:

BREAST MILK

Formula

Breast milk	12 oz.
Barley flour	3 level tbsp.
Milk sugar	3 level tbsp.

EVAPORATED MILK

Formula

Evaporated milk	6 oz.
Water	8 oz.
Barley flour	3 level tbsp.
Milk sugar	3 level tbsp.

Mix to a smooth paste, bring to a boil, then boil in a covered double boiler for half an hour, or until the warm mixture has the consistency of thick, whipped cream. The total volume should be about eight ounces, the caloric value about 50 per ounce. During the first week, one ounce of this food should be given seven times in twenty-four hours for a seven-pound infant. A Hygeia nipple with an enlarged hole is satisfactory. The infant should not be taken out of the crib; the head-end of the crib should be elevated a few inches with the patient lying on the right side. At the completion of each feeding an ounce of tepid water, normal salt or six per cent dextrose Ringer's solution should be given as a retention enema with a lubricated, No. 14 F. catheter and small bulb. No water should be given by mouth during the crucial weeks. If dehydration is very marked, if the rectal fluids are not retained, if there is high fever or oliguria, a daily hypodermoclysis may be necessary.

If therapeutic action is expected from such drugs as atropin, bromide, or phenobarbital, they should be given in sufficient amount early in the disease with the hope of breaking the spasm factor of the obstruction. Of atropin sulphate solution (one-half grain to the ounce) one to three drops should be put into three or more of the feedings; or phenobarbital, one-fourth grain into three or more of the feedings should be given until the physiologic effect can be noted. If a tumor can be palpated and if the stomach is dilated, medication is of questionable value. If oral administration provokes vomiting, the atropin may be given hypodermically, the phenobarbital in the retention enemas.

The first sign of improvement is a decrease in the amount of vomitus and an increase in the amount of fecal matter. Weighing should be postponed until improvement is sufficiently advanced, or when the advisability of operation is under consideration. Hydration by rectum or under the skin may cause a marked increase in weight. The amount of food may be cautiously increased to one and a half ounces after five days or a week and to two ounces after definite improvement has been noted. Failure in one patient should not discourage the clinician, but the surgical risk should never be increased by unnecessary delay in decision. If convinced that the dietary measures are ineffective, the surgeon should see the patient and he should give the pre-operative orders. It is advisable to give no food by mouth for twelve hours before the operation. Copious hypodermoclyses (100 to 200 c.c.) are of advantage before and immediately after operation. If blood is given, the amount should not exceed 100 c.c.

Ethylene (with a slight admixture of ether) is the anesthetic of choice, because the relaxation is more complete than with a local anesthetic; evicceration during operation occurs less frequently,

healing of the wound is more rapid, and stitch abscesses and postoperative eviceration are less frequent.

Because Pierre Fredet of Paris performed the first longitudinal muscle-splitting operation, it should be known as the "Fredet-Rammstedt" operation. The skin incision should be made where the tumor is expected to be found and that aspect of the pylorus is chosen where the fewest vessels are visible. After the superficial longitudinal incision has been made with the scalpel into the muscularis, the splitting is completed down to the submucosa which is recognized as a smooth, white layer immediately below the muscularis. This delicate part of the operation is performed with a flat, blunt instrument, not with the scalpel. Because most surgical perforations of the submucosa and mucosa occur at the duodenal end of the tumor, the surgeon exercises the greatest caution when the last fibers of the muscularis are split at this point. If not severed, the vomiting may continue or may be resumed within a few weeks; indeed, the infant may need a second operation. Perforation of the submucosa is undesirable because it prolongs the operation and anesthesia, it requires more handling of the viscera during which abrasions may occur. These in turn increase the likelihood of subsequent adhesions, which may lead to symptoms of obstruction. Peritonitis from the discharge of duodenal contents does not always occur, but it has taken a considerable toll. To insure complete severence of all of the fibers, air may be gently expressed from the stomach into the collapsed duodenum; any minute perforation can thus be detected. Abdominal dressings which go completely around the body seem safer than short adhesive strips over the incision. There is less tension from within on the skin sutures.

Postoperative treatment is mainly dietary. Inanition and overfeeding should be avoided. After a few hours a dropperful of water may be given. This may be alternated every two hours by a dropperful of breast milk or formula.

Evaporated milk ..... 6 oz.
Water ..... 12 oz.
Milk sugar ..... 2½ level tbsp.

Boil five minutes in a single boiler, refrigerate.

During the first twenty-four hours, the water may be increased gradually to an ounce, likewise food, in one ounce doses, may be given six times in twenty-four hours. After a few days the water should be omitted and the feedings increased to two ounces, then to three ounces. Aseptic nursing technic is desirable during the care of patients with pyloric stenosis. Colds and other infections should be avoided.

ANOREXIA

A fast of five to eight hours normally stimulates an appetite. Pawlow, many years ago, remarked that "appetite is synonymous with stored-up gastric juice." Attendants, working in orphanages, are wont to associate anorexia (poor appetite) in children with homesickness, congenital debility or oncoming illness. As a rule, their charges eat what is placed before them, regardless of whether the menu includes the so-called "essentials of the daily ration" or is so poor in vitamins that rickets, tooth decay and pyorrhea prevail.

Lack of appetite had become such a problem in private practice that in 1920, the following observations were carried on at the Evanston Hospital in collaboration with Drs. Minsk and Alexander. At first, twelve good eaters, aged seven to eleven years, from a near-by orphanage, were admitted over week-ends in groups of two or three. After a night-fast of twelve hours a motor meal was given at 7 a. m., and serial x-ray films were taken four hours later, and each scceeding half-hour, until the stomach was found empty. Similar observations were then carried out, in the course of a year, on twenty-one very poor eaters. Table I is a comparison of our findings in the good eaters and poor eaters.

TABLE I

Emptying Time of Stomach

	No. Children	Hours After Meal 4	5	6	7	8	Average Emptying Time
Good eaters	12	5	7				4.5 hrs.
Poor eaters	21	1	4	7	7	2	6.1 hrs.

The twelve good eaters were then readmitted, when the total and free acid of the gastric juice were determined by Toepper's method. Aspirations with a Rehfuss tube were performed an hour after the test breakfast, and were repeated some weeks later in a number of the children. Duplicate determinations were always made and the average used as the values for each child. Eighteen of the poor eaters were then readmitted and similar observations were made on them. Table II summarizes the findings in the two groups.

TABLE II

Average Gastric Acidity

	No. Children	Total Acid (Average)	Free Acid (Average)
Good eaters	12	61.2	26.3
Poor eaters	18	49.4	14.9

Before the work had progressed very far it was noted that many of the poor eaters were flat-chested, tall for their age and slender bodied; i.e., they belonged to the hyposthenic or asthenic body-type. Their habitus (body build) conformed to that of the now familiar "fatigue-posture" child. Table III shows how they compared with the good eaters.

TABLE III

Body Type (Habitus)

	No. Children	Average (Sthenic)	Poor (Hypo-sthenic)	Very Poor (Asthenic)
Good eaters	12	11	1	
Poor eaters	21	5	9	7

During the decade that has passed since these observations were published, we have learned much about the psychic aspect of the anorexia problem. Our attention has become focused, chiefly through the writings of Dr. Aldrich, on the rôle of environmental factors in the etiology of poor appetite. We have come to realize that appetite is, to a great measure, under the influence of the will. Anorexia may be a manifestation of the conditioned reflex. The sight of food or food odors may awaken unpleasant associations in the child's mind and cause persistent food refusal. Furthermore, the young child craves attention and usually receives more by not eating. A quality of human nature, already present in the young, is "negativism," i.e., the tendency to disagree or do the opposite from what is desired. It, too, plays an important rôle in anorexia.

As Dr. Brennemann recently pointed out, the rapidity with which many poor eaters transform into good eaters, coincident with a change in environment, is often so striking that, at least in them, the delayed emptying time, low acidity and poor habitus may be the effect rather than the cause of anorexia. If the appetite remains poor over a period of weeks, months and years, and the weight lags more and more, it is conceivable that the body-build of the child will suffer. Even if born with the average, sthenic habitus, in the course of time, such a child's structure changes into the hyposthenic or asthenic type.

It is not always an easy matter to find the etiologic factor. There are a few nurses who show marked skill and intuition in handling poor eaters. Such a nurse, when given sole charge of a child, will often, in the course of weeks or months, transform not only the appetite and weight, but the very disposition. It is very important, however, to eliminate the causative factor and not to allow that factor to recur when the nurse leaves. If prompt and lasting results are desired, the committed errors in technic should be ruled out at the beginning of the task. As a prophylactic measure, it has now become the duty of the physician to instruct and warn overindulgent mothers, grandmothers and nurses about the risks they incur.

There are a number of diseases which must be excluded before the physician places the onus on some member of the household. Endocarditis, goiter, tuberculosis, extreme anemia, nephritis, diseased tonsils, diabetes, celiac disease and several other chronic ailments are associated with anorexia. In some of these conditions lack of appetite may be the sole reason for the child being brought to the physician's office. Heredity, too, is an intricate factor which influences stature, gain in weight and capacity for food. Some infants gain on less food than the average requires, others need more. If food is forced in a child with a limited capacity, at least part of the next meal will be refused, instinctively, if for not other reason than a protective, compensatory measure.

MALNUTRITION

The various races of man inhabiting the earth today have survived through the ages to the present generation without any knowledge of calories, food constituents, vitamins and the required essentials of the diet. The Eskimo, the native Australian, the South American Indian are hardy and know nothing about these facts that are of such vital interest to us. The mechanical and scientific era in which we live does not influence them, but it has wrought radical changes in what we eat, and in our mode of life. We keep our bodies covered with clothes, live in artificially heated, illuminated, glazed houses; we eat the grains many months after they have been harvested. Indeed they are first devitalized by being ground into fine flour and then only served after baking or long cooking. Dairy products, meats and eggs are seldom fresh and are usually fried, cooked or canned. The tropical, vitamin C-containing fruits which we eat raw are picked many weeks before they ripen; our lettuce and vegetables are mostly grown under glass or are canned. Our daily routine keeps us indoors many hours of the day; our meals are methodically prepared in an attractive manner and are seldom chosen for their worth. Many of these factors are now customs that are here to stay. Our cows are ready prey to the bovine bacillus and the human race must be protected by pasteurization of all milk, cream, butter and cheese. Our cities have been so opulent that the inhabitants would rather eat citrous fruits than the tomato. Only the canned

juices, even of cabbage, find a place in many kitchens. Tinned, mixed vegetable pureés of a new savor are increasing in popularity among apartment dwellers.

We are beginning to realize that food should be more than calories. Although we should never sacrifice safety against tuberculosis, the colon-typhoid group and animal parasites, we should take heed of the epochal discoveries of the nutrition laboratories, animal feeding experiments and observations on the feeding of infants and children. We now know how to prevent scurvy, rickets and tooth decay. We know that appetite, cravings and palatability of foods do not guide us in what is essential for human well-being. Everyone over two years of age should consume each day at least the established minimum of the foods containing the required accessory food factors. Nothing can take the place of green vegetables, pasteurized dairy products, the vitamin C-containing foods (tomato, cabbage, banana and citrous fruits). Most young children require also cod-liver oil or the more expensive substitue, viosterol.

If a child is malnourished, i.e. if the weight is eight or more per cent below the average for height and age, a more or less radical change in diet and mode of life should be instituted. As in anorexia, the underlying cause should be sought and, if possible, eliminated. In some instances, five small meals will get in more food in a day than the customary three meals. There is a certain minimum of food consumption below which the child should not go. The optimum amount should be reached gradually by increasing the dairy products, raw fruits and vegetables. Gain in weight cannot occur until the child eats more than he needs for the daily body economy.

Besides sufficient food of the proper kind, the child with the fatigue posture requires more rest. Breakfast and supper should be given in bed for a few months. There should be a decrease in physical activity; deep breathing exercises on awakening and retiring are much more beneficial; fresh but not cold air at night; a firm mattress and no pillow will improve posture, if begun sufficiently early and continued through puberty. Thirst may be quenched to a great measure with milk; there should be a daily evacuation each morning; and no food and very little water should be allowed between meals.

The above outlined plan has been in use in office practice for many years. It has been perfected as newer knowledge has been added. When the patient and parent cooperate, the result is usually very gratifying. The minimum period in which the intensive plan should be put into effect is three months. Many accurate records have been kept on the effect of increased food intake and rest. The average gain is five pounds for the first month, three pounds for the second month and over two pounds for the third month. Ten pounds in the three months is five times the average rate of gain. One child gained twenty pounds in three months, another, thirty. One, very emaciated, tall boy of fourteen, who had not gained for years weighed fifty-five pounds. At the end of one year of this regime he weighed 110 pounds, i.e., he doubled his weight in twelve months. He was up only for school attendance—about eight hours each day during the first six months.

None of the malnourished children on this intensive feeding plan is overfed. The mother first submits a record of the food eaten for two days. This is studied and a properly balanced diet is given. It includes the "essentials" and whatever else the child likes, to total a few hundred calories more than her record shows. If possible, the amount is then increased in the course of weeks to the theoretic number of calories required, which is forty calories per pound of theoretic weight for height and age. Until the gain is well established the very emaciated child is up only eight hours a day. The school child is kept in bed until after breakfast has been eaten, and goes to bed at 4 p.m.;—later on, at 6 p.m. (before the evening meal). As the child's weight approaches the average, the hours out of bed and the activities are increased. If weight loss occurs, the food consumption and rest are accurately checked. The method has proved very useful in office practice.

HODGKIN'S DISEASE: REPORT OF CASES, INCLUDING ONE WITH PRURITUS AND THE PEL-EBSTEIN TYPE OF RELAPSING FEVER*

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A case that presents a baffling diagnostic problem, that is finally solved, is always of interest. Physicians who frequently come in contact with Hodgkin's disease easily carry in mind its vagaries. Those who see this disease less frequently are often at a loss to attach a diagnostic label to the confusing syndrome presented by it, and even most astute and experienced clinicians have had to resort to autopsy findings before coming to definite conclusions. Especially the pyrexial type, described by Pel and independently by Ebstein in 1887, may strongly challenge diagnostic acumen. This type

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presents recurring attacks of high temperature lasting from three or four days to a week or two, often equally spaced with intervals of comparative well being. The late stage of any form of Hodgkin's disease, because it may exert pressure on vital organs, tubular channels, secretory ducts and nerves, or because it may invade almost any tissue in the body, can simulate the major symptoms of many other diseases.

Howell's[2] patient had a three months' history with recurring chills and fever up to 104°, abdominal pain, and some indications of cerebrospinal involvement. His condition eluded diagnosis down to autopsy. In one pyrexial attack with abdominal pain the appendix was removed and found normal. Repeated punctures showed a normal spinal fluid. Blood cultures ruled out



Figure I
Showing the mediastinal mass which indicated the diagnosis of Hodgkin's disease.

septicemia, fulminating pulmonary tuberculosis was considered but not substantiated, and the Widal test was negative for typhoid fever. At autopsy masses of enlarged lymph glands were found along the aorta in the abdomen, on both sides of the trachea and esophagus, and in the tracheal bifurcation. Microscopically the glands showed a hyaline network supporting lymphoid cells, eosinophiles, and multinucleated giant cells typical of Hodgkin's disease.

Nearly every contributor in this field has sketched the historical events in the development of knowledge concerning this subject. Feeling that they can be described no better than by Moses Barron,[1] we quote: "Hodgkin in 1832 described as an entity a group of conditions involving the lymph nodes and at times also the spleen, which he found in a series of seven cases. It is likely, however, that in the absence of proper histologic studies, this group included, besides Hodgkin's disease, cases of tuberculosis of the nodes, malignancies and perhaps syphilis, as was well pointed out by Virchow. Later, in 1845, Virchow excluded the frank leukemias from this group, and from then on there began a more rigid classification to form a well defined clinical and pathologic entity. Wilks, in 1865, gave a comprehensive description of this type of cases and suggested the name of Hodgkin's disease. Cohnheim, in the same year, used the name pseudoleukemia. Four years later, Billroth proposed malignant lymphoma as the designation for this condition, and Fisher in 1897, described twelve cases under this heading. The clinical course of the disease certainly warrants this designation (malignant lymphoma), since there is no authentic case on record that has not had a fatal termination, a course which is associated only with a very malignant tumor.

"With further studies of this condition there developed a strong tendency to consider the disease an infectious granuloma, and the term lymphogranulomatosis, first used by Gross in 1926, has had wide acceptance, especially in Europe. This term is superseded by lymphadenoma in the English literature, while American authors seem to prefer the name Hodgkin's disease. That it is of an infectious nature has not been universally accepted, as can easily be inferred from MacCallum in the recent edition of his 'Textbook on Pathology'. Since we have not definitely recognized an infectious agent, we are not quite sure whether Hodgkin's disease is a tumor or not."

A review of cases reported in the literature, with a consideration of the studies made and opinions expressed regarding etiologic factors in this condition, bring out certain salient features that may help to keep this entity in mind when confronted with it as a diagnostic problem.

Hodgkin's disease apparently begins as a lymphoid hyperplasia [6] which ultimately becomes the seat of granulomatosis. Any group of lymphatic glands may be primarily affected or it may originate in the spleen which in rare cases may be enormously enlarged. [4 and 6] The usual case may be found with glandular enlargements in the

superficial lymphatic system. The cervical, supraclavicular, axillary, or inguinal regions may show enlarged nodes. The question of differentiating it from other lymphomatous enlargements as found in lymphosarcoma, tuberculosis, syphilis, the leukemias, or secondarily infected lymph glands, calls forth the best judgment that clinical experience affords, and may usually be settled by biopsy, if other criteria in these diseases have not definitely determined the diagnosis.

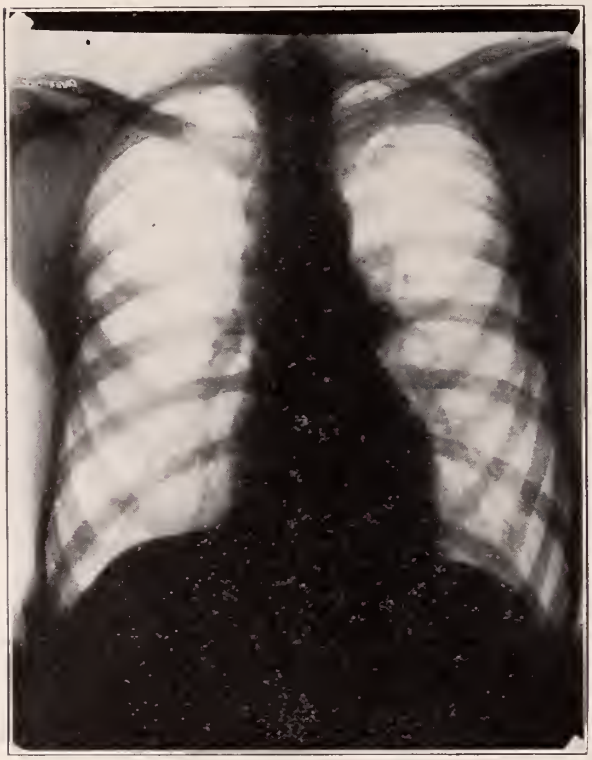


Figure II
Showing reduction in mediastinal mass following x-ray therapy.

Greater difficulties arise when the deeper lymphatic glandular groups or the spleen are primarily involved. In this instance superficial lymph nodes may scarcely be palpable. When the disease begins in the deep glands confusing types of pruritus may be the precursor by weeks, months, or years of any other signs of trouble. During the pruritus no lesions may be manifest on the skin but often an erythema, or papular lesions may be present. One case was called German measles.[1] Three different theories have been advanced in regard to the pruritus: first, invasion of the skin by toxins of the disease; second, involvement of the skin by some causative agent; and third, actual cellular metastasis. Nothing definite, however, is known. Microscopic examination will sometimes show cells, typical of Hodgkin's disease, infiltrated in the skin. Pigmentation may be present and lead to confusion with Addison's disease. These patients may later exhibit fever of an irregular type or, more dramatically, may be attacked by severe chills with fever mounting to 102° or 104°, accompanied by severe anorexia and sometimes vomiting. There may be varying degrees of pain in the abdominal, lumbar, or thoracic regions. Pain may dominate the picture to the extent of inviting operation. During those attacks it may be noted that certain palpable glands or the spleen may enlarge, only to recede when the attack abates. This has been an important observation. It has been noted that attacks recur after periods during which the patient feels comparatively well. These periods occur with almost startling regularity. One patient was treated for fourteen months for malaria.[6] Other types of relapsing fever may come to mind as in septicemia, trypanosomiasis, and kala azar. Blood studies are of little value because blood counts are normal and a leukocytosis usually does not occur even with a temperature of 104°. Differential counts and cellular forms may be essentially normal. Some patients may show an eosinophilia of 18 to 40 per cent and bring into consideration such infestations as trichiniasis, filariasis, trypanosomiasis, or helminthiasis. The spleen may be enlarged, masses along the spine may be palpable through the abdominal wall, or best of all, if this syndrome in Hodgkin's disease has come to mind, a palpable lymph gland may be discovered and biopsy disclose the typical pathologic picture. X-ray examination may show abnormal shadows, or as in one case we are reporting, disclose mediastinal masses and give a clue to the diagnosis. Vertebral erosions may appear in the roentgenograms or there may be destructive or hyperplastic areas disclosed in other bones. The diagnosis resolves itself into remembering this clinical syndrome, the exclusion of diseases it may simulate, and the opportunity for biopsy.

Late manifestations of the disease, with pressure or obstructive symptoms, bone or central nervous system invasion, or localized organic interference, bring up a host of diagnostic possibilities. These may direct attention to a particular location and as a consequence, the primary source of the disease may not be discovered. Marked secondary anemia appears late with general cachexia.

The causative factors are still undetermined. Twort,[7] after six years of research, could throw no new light on the subject and failed to verify other observations which claimed a specific animal or vegetable parasite as the primary causal agent.

Treatment by x-ray reduces the glandular

masses, may relieve pressure symptoms, and abate the relasping attacks in the pyrexial types. Barron[1] states that the course of the disease is not influenced by x-ray or radium. Jenkinson[3] believes irradiation can be overdone and is now limiting his treatments to existing areas of enlarged glands. He then treats other enlargements as they appear, thus seeking to avoid damage to the blood forming tissues with the subsequent possibility of induced secondary anemia and cachexia. Desjardins, discussing his paper, feels that treatment of the mediastinal and retro-abdominal glandular areas in every case, especially where fever is present, retards recurrences and more effectively prolongs life. All cases are fatal.[1]

CASE REPORTS

Case 1. A railroad switchman, aged forty-eight, was examined on July 2, 1932. He complained of attacks of remittent fever and weakness. In June, 1931, he had developed an almost intolerable generalized pruritus associated with slight dermatitis, which centered about the waist. The dermatitis persisted for a short period and was called "shingles," but the pruritis continued and was so severe as to incapacitate him for nine weeks. At that time he complained of no other illness. During December, 1931, he had developed chills, fever, and sweats at night, which continued for five days, followed by an afebrile period of two weeks. Since then at intervals of two weeks he has had similar spells of fever lasting from four to ten days. In April, 1932, the spells became more severe, and the temperature reached higher levels (100° to 103°) which were maintained during the attack. Since that time, with each spell the patient has complained of nausea, anorexia, headaches, weakness, obstinate constipation and generalized abdominal soreness. With each attack of fever a swelling appeared in the right submaxillary region which receded partially after the temperature returned to normal. The present attack has been the most severe and has lasted for eight days. Recently he has not slept well. His appetite has been good between spells; he has had no cough, but there has been some nocturia. There has been no further evidence of skin eruptions or any recurrence of the pruritus.

Examination: The patient was five feet and six and three-fourths inches in height and weighed 120 pounds. This was twenty pounds under his normal weight. Systolic blood pressure was 94, diastolic 56, pulse rate 80, temperature 101.2°. The Wassermann reaction of the blood was negative as were tests for typhoid, paratyphoid, undulant fever and malarial fever. The urinalysis was negative except for a slight trace of albumin. The blood showed 60 per cent hemoglobin, 8,200 leukocytes, 3,980,000 erythrocytes, 80 per cent neutrophiles, and 20 per cent lymphocytes. There was a rather firm swelling 1½ by 2½ cm. in the right submaxillary region which was slightly tender on pressure. Small cervical, inguinal, and axillary nodes were palpable. The heart was normal. The spleen and liver were not palpable. The tonsils were infected and showed liquid pus on pressure. The teeth were all extracted. Rectal examination was negative. There was a thickening in the left epididymis. Roentgenograms of the chest revealed bilateral mediastinal masses, the larger mass being on the right side. Roentgenograms of the colon and right lower jaw were negative.

On July 7, 1932, the gland in the right submaxillary region was removed for microscopic examination and the report was "The sections are those of a typical Hodgkin's disease." X-ray treatments were given over the mediastinal, retro-abdominal and other lymphatic glandular areas during the next two months. There was at first moderation; then abatement of the pyrexial attacks. The patient gained weight and felt comparatively well. In the third month he had a marked exacerbation of symptoms, lost strength rapidly, became intensely jaundiced, and died October 24, 1932.

Case 2. A drug store clerk, single, aged 52, was examined April 29, 1932. He stated he had had lues twenty years ago. He had noted a slowly growing soft swelling on the inner aspect of the left thigh, just above the knee for twenty-five years. During the past week this swelling had become acutely inflamed and painful and had not decreased in size as had been the case following previous enlargements. Small glands appeared four months ago in the right axilla and three months ago in the right supraclavicular region. These glands have gradually increased in size, are freely movable and not painful. About five months ago the patient began to complain of abdominal distress, gas, sour eructations, and burning in the midabdominal regions, beginning about one-half to one hour after eating, relieved by alkalies, but not definitely by food. There was seldom nocturnal discomfort, no vomiting and no acute or subacute abdominal pain. This condition was made worse by fatty foods, acid foods and coffee. The bowels moved normally. There was slight nocturia, but no other urinary difficulties.

Examination: The patient was sallow in appearance. He had lost no weight. The blood pressure was systolic 140, diastolic 80, pulse 80, temperature 98.6°. Urinalysis was negative. Examination of the blood showed 68 per cent hemoglobin, 4,600,000 erythrocytes, and 9,300 leukocytes. The blood Wasserman was negative. The pupils reacted normally, knee jerks were normal and there were no abnormal neurologic findings. The tonsils were large and infected. There was marked periapical infection and pyorrhea shown by x-ray examination of the teeth. There was present a chronic lichenified dermatitis involving both legs with marked congestion, redness and induration. There was marked induration of the left thigh, and above the popliteal space at the inner aspect of the left thigh was a pointed, inflamed, fluctuant swelling, associated with a large thrombosed varicose vein. Varicose veins of both extremities were found but were most marked on the left leg and thigh.

Examination of the heart showed a systolic murmur over the aortic area associated with an accentuated second aortic sound. The prostate gland was slightly enlarged. Firm, freely movable glands 2 by 2 cm. were palpable in the right axilla with smaller ones in the left axilla and left groin. In the right supraclavicular region was an isolated movable gland 2 by 2 cm. Roentgenologic examination of the chest and stomach was negative.

At operation, a large fixed thrombus, leading upward and downward from the mass above the left knee was removed with its enclosing vein. The enlarged lymph gland in the right supraclavicular region was removed for examination. The pathologic report on the gland, was: "Normal architecture absent; fine reticulum; diffuse fibrosis; eosinophiles, multinuclear giant cells; sclerosing type of lymphoma (Hodgkin's Disease)." X-ray treatments were given over the lymphatic glandular areas. The enlarged glands receded but no improvement was noted in his general condition. He complained of pain in the dorsolumbar region of the spine at our last observation August 30, 1932, but exhibited no unusual neurologic symptoms. During the next six weeks he developed a peculiar gait, retention of urine, and a positive Wassermann reaction on the spinal fluid led the physicians then caring for him to feel that he might have tabes. He died October 21, 1932. Whether his symptoms were due to tabes or to erosion of the vertebra and invasion of the spinal cord by Hodgkin's disease cannot be definitely stated.

SUMMARY

It seems apparent that Hodgkin's disease is primarily a lymphoid hyperplasia which is gradually superseded by granulomatous changes. It has invasive, erosive, and metastasizing capabilities by which any tissue in the body may become involved.

Primary predominant involvement of the retroabdominal and thoracic lymphatic glands often presents a pyrexial syndrome with chills, high fever, and prostration followed by periods of comparative well being.

Pruritus with or without apparent skin lesions may antedate other systemic symptoms by weeks or months.

Diagnosis rests on remembering this pyrexial clinical entity, x-ray disclosure of unusual masses or bone involvement, and in finding a favorable gland for biopsy, together with diagnostic exclusion of other diseases that suggest themselves.

The blood picture is essentially normal until secondary anemia develops. Sometimes eosinophilia is present. This is suggestive especially in the presence of recurring high temperature and chills.

The etiology is unknown.

Treatment by x-ray and general supportive measures often give symptomatic relief for a time and prolong life. All cases are fatal.

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HYPERPLASIA OF THE THYMUS GLAND IN INFANTS*

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This paper will adhere strictly to the subject of hyperplasia of the thymus gland and more particularly that form of hyperplasia which gives rise to symptoms. Therefore such subjects as the normal variations in size and shape of the thymus and its functions, and abscesses, syphilis, tuberculosis and neoplasms of the thymus, are rigidly excluded. Furthermore, this paper will not in any way touch on the subject of thymic constitution as status lymphaticus or status thymicolymphaticus.

The thymus gland is located in the upper mediastinum lying across the trachea and great vessels of the heart. According to Joseph Garland of Boston[1] it arises as a paired, ventral outgrowth from the entoderm of the third and fourth branchial clefts, the main portion coming from the third. According to Abt,[2] the thymus gland is an epithelial organ becoming infiltrated later with lymphocytic cells. The physiology of the thymus is unknown.

The symptoms produced by hyperplasia of the thymus are disturbances of respiration such as noisy respiration, dyspnea, retraction of the intercostal spaces and cyanosis. There may be digestive disturbances, vagatonic in origin, as regurgitation and symptoms of pylorospasm.

John Lovett Morse, Emeritus Professor of Pediatrics at Harvard Medical School, in the Medical Clinics of North America, stated "there is no doubt that hypertrophy of the thymus does occur and that pressure on structures behind it may cause disturbance of respiration. These symptoms may be either continuous or intermittent as the size of the thymus varies according to the

*Read before the Lee County Medical Society, Keokuk, Iowa, June 9, 1932.

amount of blood it contains. The pressure is exerted chiefly on the trachea although the veins at times may be slightly compressed. Pressure on the trachea causes noisy respiration, dyspnea, retraction of the intercostal spaces and cyanosis.

"When the thymus is enlarged enough to cause symptoms and physical signs, Roentgen ray examination will, of course, show a large thymic shadow."

In a recent personal communication from Dr. Morse,[4] he said, "I doubt very much if the thymus ever causes any symptoms except by direct pressure. When it does I believe that the picture is pathognomonic and can be recognized without the aid of the x-ray. Treatment with the x-ray unquestionably reduces the size of the thymus and relieves the symptoms."

Donaldson[5] of Ann Arbor, roentgenologist for St. Joseph's Mercy Hospital, in a paper on "Hyperplasia of the Thymus" concluded, after a study of 1,045 patients, that examination for thymus should not be limited to the larger babies only since almost as many infants weighing eight pounds or under, had had evidences of enlarged thymus as those weighing over eight pounds. Regression of the gland was seen in all but a few cases. A certain type does not disappear.

Aldrich,[6] in reporting forty cases of enlarged thymus which he had treated over a period of eight years, stated that eighteen of the forty had pylorospasm, and that seventeen were relieved of their symptoms by irradiation. He found in these cases that atropin could be discontinued within two weeks whereas the average child needs atropin for over two weeks. He believed also that radiation over the thymus was effective in relieving symptoms of bronchial asthma whether the gland was definitely enlarged or not.

Barbour[7] reported thirty-seven cases of congenital pyloric obstruction that did not yield to the usual medical measures. These were radiated over the thymus gland. In thirty-three cases the vomiting and visible peristalsis subsided following radiation. Four did not change and a Rammstedt operation was necessary. Of the thirty-seven, eighteen had classical pictures of obstruction. He believed that a therapeutic x-ray test should be made before surgical intervention was considered.

Dannenburg[8] reported forty-four cases of enlarged thymus. Stridor was present in twenty-nine. In twenty-six, definite relief was obtained by irradiation. Of twenty-six cases with cyanosis, four were relieved immediately, definite improvement was noted in fifteen others and five obtained no relief. He believed that the cyanosis was due to pressure on the large vessels and the cardiac auricles. If the head is partially extended, the thymus will be lifted up and the cyanosis relieved. However, if the cyanosis is due to pressure on the trachea then it will be made worse by this exercise.

Kirkland[9] divided his patients into three classifications; those showing symptoms in the first hours of life; those in whom the condition was apparent during the first week of life, and those in whom symptoms appeared any time up to puberty. X-rays generally showed an enlarged shadow, and x-ray treatment rapidly restored the child to normal.

Quoting from Marriott,[10] "Where there are definite signs of an enlarged thymus and symptoms which might possibly be due to this we would of course not hesitate to apply radiation therapy."

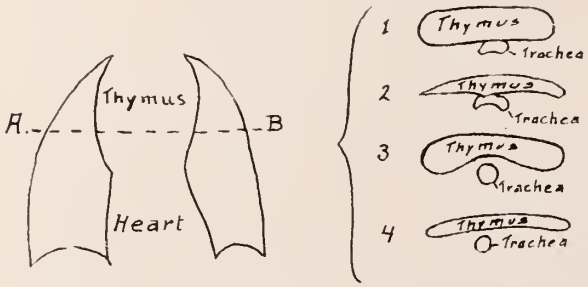
Hayes and Jeter[11] recommend Pfahler's therapeutic test which is, *if obstruction to breathing is not relieved by irradiation the condition is not due to thymus.* Their conclusions briefly were as follows: An enlarged thymus gland produces pressure and toxic symptoms. Every child with the slightest indication of thymus enlargement should have an early x-ray examination. X-ray therapy seems to be the best method of treatment and has the added advantage of not producing any harmful effects. Regeneration of the thymus is frequent and the patient should have an examination at varied intervals. All suspicious cases should have the benefit of x-ray therapy even when positive x-ray findings are absent.

Pancoast[12] is of the opinion that, "We have sufficient evidence to lead us to believe that obstructive phenomena and cyanosis can result. There is another factor which can cause asphyxia and that is paralysis of the recurrent laryngeal nerve which often complicates an enlarged thymus."

MANNER IN WHICH ENLARGED THYMUS PRODUCES PRESSURE

According to the anatomic studies of Novac, Boyd and Baetjar, the pathologic thymus is not wide but wedge shaped and thick. Slide A shows in a diagramatic way the usual appearance of an enlarged thymus. If we could make a cross section of that child's thorax just above the heart through the widest part of the thymus, any one of the four possibilities shown at the right hand side might be present. The two upper figures represent typical cases where the film shows a wide mediastinal shadow. These glands produce pressure on the trachea. Below this are the types found accidentally on making a film of the chest for some other reason. Number three has a nar-

row portion over the trachea but is as thick in its parenchyma portions as number one. Number four is thin throughout and is the type that will be shown well on a light film made with low penetration but will be blotted out entirely on stronger

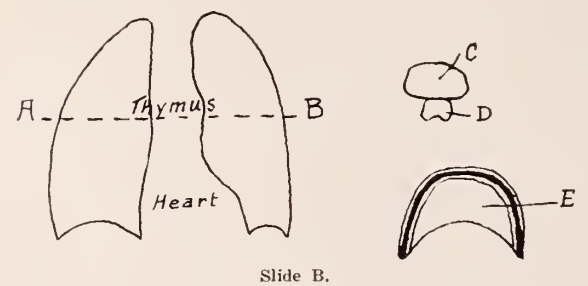


Slide A.

Slide A—Left hand diagram represents a typical appearance of an enlarged thymus as seen in the usual anteroposterior view.
Diagrams one, two, three and four show the various possibilities that might exist if a cross section could be made at the line AB.
One and two are thick glands in the central portion, causing pressure.
Three is thick in the parenchymal portions but not over the trachea, therefore causing no pressure.
Four is thin throughout.

penetration, whereas the first three will not. These last two do not produce pressure and consequently there are no symptoms and treatment is not needed.

Slide B shows on the anteroposterior view very little widening of the thymus shadow, yet the infant may exhibit all the signs and symptoms of thymus hyperplasia. This is because the enlargement of the thymus is present without being vis-



Slide B.

Slide B—This diagram shows no apparent enlargement of the thymus shadow but the child may still have symptoms of thymic trouble.
At the right is represented the possibility that might exist if a cross section were made along the line AB. C shows a thickened thymus although the transverse diameter is not visibly enlarged.
D represents the trachea being compressed.
E shows how pressure on the trachea causes posterior compression stenosis.

ible in the anteroposterior view. The small diagram in the upper right hand corner demonstrates this. These patients need radiation fully as much as those in whom symptoms of pressure are found in conjunction with a wide mediastinal shadow.

In the lower right hand corner is a diagram illustrating the manner in which pressure is exerted on the trachea. We will remember from our anatomy that in the infant the cartilagenous rings are developed in the anterior portion only. Since the posterior portion is deficient and easily collapsible, respiratory difficulty occurs when pressure is exerted on the trachea from in front by an enlarged gland or one engorged with blood.

CASE REPORTS

My series consists of ten patients with an average age of 3.9 months. There was one child eighteen days old and the next youngest was two months. The oldest was a year old. There were four boys and six girls. Seven gave an excellent response to treatment varying from a marked regression of symptoms following irradiation to complete relief after two treatments. Three did not respond.

The first of these, the eighteen day old infant, died of intussusception eight days after the first treatment. This child had a greatly enlarged thymus and the principal symptom was marked pylorospasm producing retching and vomiting. Intussusception is one of the complications that may follow in these cases of pylorospasm.

The second patient was an unusually large and fat baby. The mother noticed shortness of breath in the infant after eating but the condition that worried her most was a unilateral hypertrophy of the right arm and leg. Her family physician suggested an x-ray examination of the thymus, thinking that an enlargement of this gland might be causing pressure and interfering with the venous return on that side. The thymus shadow was lobated and enlarged. Very little benefit resulted following a course of x-ray treatments. The mother consulted an orthopedic surgeon in Chicago who agreed with the family physician and recommended another series. We advised against this as we felt like Pfahler, that a failure to reduce the size of the upper mediastinal shadow proved that it was not due to thymus. However, we repeated the series. An examination made yesterday showed distinct reduction in the size of the gland. There was a slight difference in the size of the humeri between the two sides, the right being the larger.

The mother of the third patient reported that the child had had respiratory trouble since birth. This child showed an enlargement of the thymus in a film taken anteroposteriorly and also pressure on the trachea in films made on inspiration and expiration in the lateral views. The mother reported much relief after two treatments and was well satisfied until a check-up examination showed little change in the size of the gland. Although the child is now doing well she still complains of its

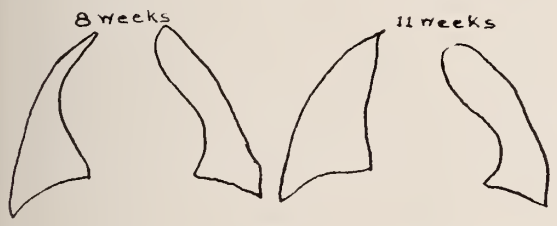
having a rattling in the throat and difficulty in breathing.

Seven patients were relieved by x-ray treatment and diagrams of the glands are shown by the following tracings made from the original films.

As you study these tracings I wish to point out particularly the irregularity in the shape and size of the thymus shadow, and we must constantly bear in mind that there exists just as great a variation in the thickness of the thymus as in the width. In this respect the thymus resembles the thyroid gland to which it is related.

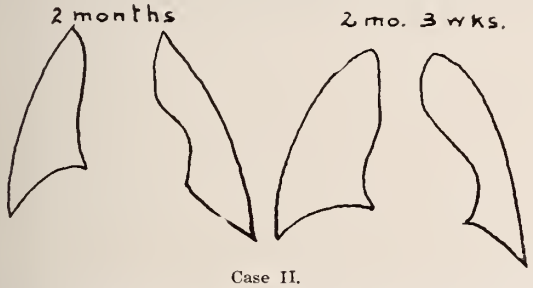
While we realize that the anteroposterior view is not always dependable as a means of an accurate diagnosis in this condition, we can be reasonably sure that when we see a marked narrowing in the width of the thymus following irradiation, the thickness of the gland is also correspondingly diminished. In all of our cases, lateral views were taken both on inspiration and expiration, but it was not thought necessary to show these in this demonstration. One more fact that we must also remember is that a gland can by being temporarily engorged with blood become so enlarged that it will cause pressure on the trachea.

The following pathology should be considered and excluded before a definite diagnosis is deter-



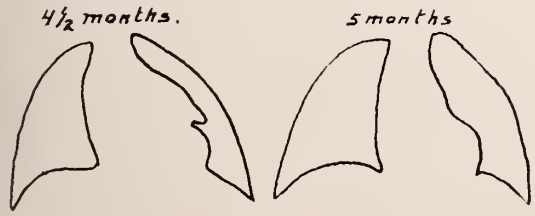
Case I.

Female, aged two months. Face presentation. Mother had tuberculosis. Peculiar breathing, growing steadily noticeable. Baby losing weight and unable to sleep. Child weighed eleven pounds at two months. Type of delivery caused child to hold its head continually in extension.



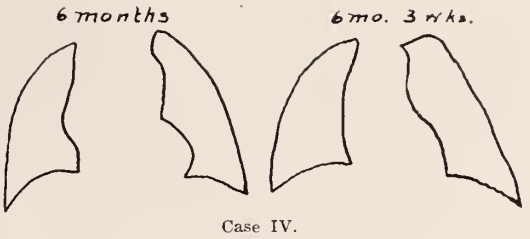
Case II.

Male, aged eight weeks. Typical case of thymic asthma. Symptoms entirely cleared up within two weeks following treatment.



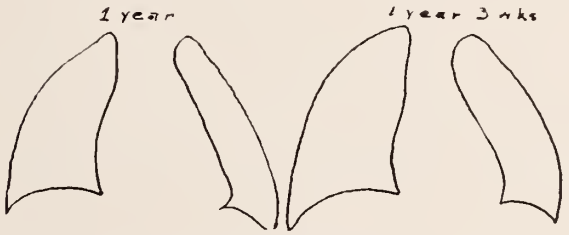
Case III.

Female, four and one-half months. Child underweight. Vomiting since three weeks of age. Marked improvement after two treatments. At eleven months feels fine, weight nineteen and one-half pounds. Mother says, "I consider the treatment a good investment."



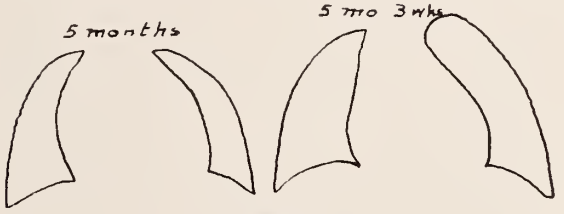
Case IV.

Female, aged six months. At birth weighed seven and one-half pounds. Three months duration of cough and rattling in throat, gradually increasing until child had choking spells. Improvement noted immediately after first treatment. Choking practically ceased. Moderate gain in weight. This child was not a fat baby, but slightly underweight.



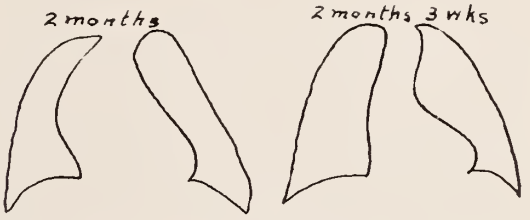
Case V.

Female, aged twelve months. Vomiting and rattle in throat. Marked improvement after two treatments.



Case VI.

Male, aged five months. Wheezing when breathing, since birth. Sometimes vomited food and had choking spells. Considerable improvement three weeks later after two treatments.



Case VII.

Female, aged two months old. Emaciated baby. Has had symptoms of pyloric stenosis for one month. Marked improvement followed two treatments.

mined: foreign bodies in the air passages, obstructive specific laryngeal and retrotrachial abscesses, adenoids, atelectasis and any other unusual collapse of soft tissue. When none of these is found we must keep in mind whooping cough, meningitis and congenital heart and recurrent laryngeal nerve paralysis. This latter complication may remain, producing symptoms even after the thymus gland has been reduced.

CONCLUSIONS

I believe that with this background we can state a few definite facts concerning thymic hyperplasia.

1. Hyperplasia is a definite entity and universally recognized as such.
2. Some cases of hyperplasia produce symptoms of respiratory or digestive disturbances.
3. When symptoms of thymic pressure are present, a rapid shrinkage of the enlarged gland and a marked relief of symptoms follow irradiation.

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CALCULOUS DISEASE OF THE URINARY TRACT*

F. HAROLD ENTZ, M.D., Waterloo

The existence of calculous disease of the urinary tract has been known to medical science since ancient times. The first definite description we have concerning this condition is that of Hippocrates. He gave an especially accurate essay on the symptoms and treatment of the condition as well as his theory concerning the etiology. During more recent years, advancement has been made chiefly along the lines of accuracy in diagnosis, the attendant pathology, and the surgical treatment of the condition.

The etiology of stone formation is as yet unknown. Many theories have been advanced but none of them has satisfactorily explained the phenomenon. Hippocrates ventured the explanation that calculous formations resulted from the deposition of urinary salts in a concentrated urine. His theory is still upheld by many investigators today. However, in the light of present-day knowledge it can be considered merely as a contributing factor.

The first experimental work done on urinary calculi was that of Nuck[7] in 1772. He found that incrustations would develop on a block of wood introduced into a dog's bladder. This discovery



Fig. 1. Stone in a single right kidney; double left kidney. Information of inestimable value to the surgeon.

was later confirmed by Sheldon[11] in 1802. Apparently such incrustations are more prone to form on rough objects than on smooth objects. The observation has also been made that calculi will form on linen or silk suture when exposed to the urine but not on catgut under the same conditions. This is undoubtedly due to the rapid absorption of the latter. The clinical importance of this fact may be seen in those cases in which an unrecognized injury to the bladder has occurred during the course of a pelvic operation.

Considerable work has been done concerning the effect of vitamins. Osborne and Mendel[8] and von Leersum[4] have found that a diet deficient in vitamin A will lead to formation of urinary calculi in the smaller animals. Fugimaki[2] found that diets deficient in either vitamins B or C would not cause the deposition of calculi but he confirmed the work of the former investigators in regard to the deficiency of vitamin A. He carried the work

* Presented before the Austin Flint-Cedar Valley Medical Society, Algona, Iowa, October 6, 1931.

a step further and found that after forming these calculi he was able to cause their disappearance as shown by x-ray control, by feeding a diet rich in vitamin A. Clinically it is difficult to evaluate these findings among the average class of patients but it undoubtedly may be a factor in some of the



Fig. 2. Infected left renal calculus, very little damage to the kidney parenchyma.

poorer classes. It is almost certainly the cause for the very high frequency of bladder stones occurring in certain regions such as Dalmatia, China and India. The bladder stones in these regions are seen principally in children and young individuals and occur so frequently that it is the common practice of missionary doctors to allow four to six cases to accumulate and operate on them one day a week. The action of a vitamin A deficient diet is chiefly on the epithelium, producing keratosis or horny changes of the superficial epithelium so that it resembles skin. This is, of course, the cause of xerophthalmia and Wolbach and Howe[12] have shown that keratosis of the epithelium of the biliary tract and urinary bladder are similarly marked. It is exceedingly probable that changes produced by keratosis in the wall of the urinary bladder allow absorption of the precipitated salts, since there are usually crystals in the urine which are capable of deposition, as evidenced by the incrustation that always occurs in a rubber cystostomy tube left in place for an indefinite length of time.

The work of Rosenow and Meisser[10] would indicate that focal infections may play a rôle in the etiology of urinary calculi. That focal infections may incite urinary tract infections and delay their cure is not doubted, but that there is a specific organism causing this condition is not proved. The rôle of infection may be mentioned more specifically. Its effect is variable. Many stones exist in the absence of any demonstrable infection and urinary tract infection without stone formation is exceedingly common. This simply brings up the old question of which is first, the stone or the infection? It is doubtful if any stone can exist indefinitely without becoming infected. However, the incidence of recurrence is much greater in those kidneys in which the infection has preceded the operation. This factor might be regarded as evidence of the specific action of infection, but it would seem better explained as a lowered susceptibility on the part of the cells of the urinary tract. Previous investigations have shown that in a high percentage of cases, the application of phenol[3] to the uninfected pelvic mucosa leads to the forma-



Fig. 3. Bilateral renal calculi with considerable renal damage.

tion of bone in the pelvic wall. This is offered as a possible factor in these recurrent calculi.

It is hard to analyze the rôle played by stasis. The stasis normally present in the alimentary tract, where most of the calcium and phosphorus

is eliminated, and the relative scarcity of calculi, would indicate that stasis is not the only factor at work in causing stone formation in these cases. The initial pathology in cases of hydronephrosis associated with stone formation is questionable. It would seem to me that the low specific gravity of urine from a hydronephrotic kidney would favor the stone as the initial lesion in most cases. Stasis *per se* may, however, play a great part in the formation of calculi associated with enlarged obstructing prostate.

Much valuable work has been done on the colloidal chemistry of urine in its relation to the formation of calculi. Chemical studies have been made on experimental animals by feeding them oxamide, a diamide of oxalic acid. The fact that these depositions were found first in the renal tubules is of clinical interest. Undoubtedly many of the urinary calculi have their inception in this point instead of in the lower calyx as is generally supposed. Since the work of Neuhof,[5] it has been known that fascial transplantations to the bladder as yet nothing of clinical significance has been contributed from this work.



Fig. 4. Recurrent calculi of right kidney. Initial calculus removed in 1901. Marked infection of both kidneys, same organism (staph.).

In 1891 Nicolaier and Epstein[6] found that urinary calculi could very easily be formed in experimation of calculi. It is certain that the true colloids have some effect on the urinary salts but

wall would result in bone formation about the periphery of the patch. He attributed this phenomenon to the deposition of calcium salts in the necrotic tissue in contact with the urine. Phemister[9] later concluded that the acidity of the urine was also an important factor in view of his failure to duplicate this in the herbivora. This was disproved by the recent work of Huggins[3] who found it to be the result of the urinary tract mucosa alone. The relation of the cells of the urinary tract mucosa to stone formation has been neglected in former investigations. It is hoped that something of clinical importance will result from continued work which is being conducted along this line. Phemister[9] has reported two cases in which he found lamellar bone in the nucleus of two pelvic stones which were attached to the mucosa. This is the only reference to such a nucleus in the literature and it seems possible that something is being overlooked which may be of the greatest importance. As a rule, the calculi which have been removed are not carefully enough examined. A routine examination of the entire stone is unsatisfactory, since it affords very little information concerning the nucleus which is the all-important point to be observed.

In view of the vague understanding which we possess at present regarding the eitology of calculous formation, any prophylactic measure we practice may rightly be considered as a "shot in the dark." Certainly this statement will hold true as regards the occurrence of primary stone. However, in view of the fact that approximately 15 per cent of any series of cases is noted to be an incidence of recurrence, it behooves us to make a careful analysis of each case at hand in an attempt to lower this rate. There is enough evidence at hand to support the contention that all urinary tract infection is remedial. It is, of course, necessary first to remove the foci of infection. Ordinarily the usual medical management of these infections, that is, forced fluids and alteration of the P_H of the urine, will be sufficient treatment. In my opinion, many of the urinary antiseptics on the market today are not worth the price asked. It is futile to advise the use of various mineral and distilled waters except as a means of increasing the fluid intake. Failure of the medical management should be the signal for a more active therapy, such as pelvic lavage with some of the accepted antiseptics. It is a well established procedure to correct if possible at the time of operation any gross abnormality of the pelvis which has been demonstrated by previous pyelography. Clinical experience has also shown that stones will grow much more slowly in an acid medium than in an alkaline medium.

Most cases of calculous disease present classical symptoms. The typical case is that of colic with a sudden onset of pain in the costovertebral angle with radiation downward along the course of the ureter to the bladder, genitalia, or inner thigh. This type is simple enough to diagnose, especially if the case shows red blood cells in the urine and tenderness is apparent over the involved kidney. Renal pain may, however, be found in some very bizarre locations. It may be most intense in any one of the locations previously mentioned, or it may be referred to the kidney on the opposite side. Perhaps the greatest difficulty will be found in those cases in which the pain is most severe over the anterior renal area, which is roughly a point about an inch below the costal cartilage of the ninth rib. This pain usually assumes a boring type radiating through to the back. As a rule the physical findings in these cases will aid very materially, in that the most severe tenderness will be in the costovertebral angle as elicited by bimanual palpation.

The group of patients with gastro-intestinal symptoms presents another difficult problem in diagnosis. Carlson[1] has shown that stimulation of the renal pelvis, ureter, and bladder, very often causes a contraction of the pylorus and incidentally acts reflexly on the other viscera. It is quite evident from this, then, just why it is possible to have a distress radiating upward at times, or symptoms of bowel distress and in some cases a fairly typical history of ulcer. Careful physical examination and an accurate history will give one a clew as to the site of the pathology even in these cases. The value of a careful urinalysis is tantamount to good work in any case but is doubly so in such cases. A fresh specimen should be used and the presence of blood cells makes cystoscopic examination a necessity, even though no calculi appear in the x-ray.

Surgical treatment is indicated in renal and ureteral calculi in three types of cases; first, those in which the stone is obviously too large to pass or is impacted; second, those in which the stone is causing serious renal damage; and third, those in which infected kidneys aggravate the infection just as a sequestrum does in chronic osteomyelitis. The early removal of such a stone is the most conservative type of renal surgery. It does not seem possible that a stone, especially of the rough spicule type, about five millimeters in diameter, will pass through a normal sized ureter without meeting one or more of the above conditions and it would therefore seem unwise to select arbitrarily a stone of larger size as the limit for surgical interference. Material aid very often can be given an otherwise impacted ureteral calculus by manipulation with a ureteral catheter, especially, if by so doing, it is possible to change the axis of the stone. The many instruments devised for grasping these ureteral calculi have, in my hands, proved very disappointing.

A factor which is deserving of more careful consideration is that of infection. There is frequently infection in one kidney containing a stone, with neither infection nor stone in the opposite kidney. Experience has shown that by some devious route the same infection, bacteriologically, may pass to the opposite kidney if operation is delayed. Therefore, as a rule, it is not wise to allow the large silent calculi to remain without attempting to remove them—this is false economy at best.



Fig. 5. Primary vesical calculus in male of eighteen years having a nucleus of chewing gum.

A careful analysis of cases tends to prove the fact that the majority of vesical calculi are secondary. The chief etiology of a primary vesical calculus is a foreign body, description of the nucleus of which makes an interesting bit of reading. The next most important is one of the deficiency diseases previously described. The definite geographic location of these latter cases renders them of less importance to us locally. The symptoms and diagnosis are quite apparent.

The treatment, of course, is removal, either by crushing with the cystoscopic lithotrite or surgical removal through the suprapubic route. Failure to treat these conditions actively will inevitably result in marked urinary tract infection and a gradual destruction of the elastic bladder wall. The latter will in turn allow the infection to spread to the kidneys by way of the ureter and so result in renal damage.

Another type of disease which bears mention only is that of "hysterical calculous disease." The diagnosis is often difficult to make and the treatment equally unsatisfactory. These cases are found principally among drug addicts and typically hysterical individuals.

Black's Building.

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Case Report

OBSTRUCTION OF THE SMALL INTESTINE DUE TO GALL STONES

J. F. ALDRICH, M.D., and BENJAMIN S. BARNES, M.D., Shenandoah

Many cases of obstruction of the small intestine due to gall stones have been reported. The condition was first recognized by Bartholin[1] in 1654. Courvoisier[2] in 1890 reported 131 cases. British writers[3] seem to consider these cases very rare, but in this country numerous reports would indicate that they occur frequently. It has been estimated that this condition causes from one to four per cent of the total cases of acute obstruction.

These cases usually occur in persons over fifty years of age.[4] Stones may enter the bowel either by the common duct or by perforation of the gall bladder, although in the case of very large stones causing obstruction, perforation is most likely to be the means of entrance.

Courvoisier studied thirty-six cases, of which twenty-five showed perforation from the gall bladder into the duodenum, one into the ileum, and two into both the duodenum and colon. There were no fistulas in the other cases, indicating passage through the duct. The same authority quotes instances of gall stones producing fistulas into the pleura, the lungs, female genitalia and urinary bladder.

Herman reported the point of intestinal obstruction in 145 cases as follows: in the colon, thirteen cases; in the duodenum, nine; in the jejunum, thirty, and the remainder, in the small intestine, mostly in the terminal ileum.

Diagnosis is rarely made before operation. The Roentgen ray may be of value in making a diagnosis, although the acute nature of the obstruction would seldom indicate its advisability.

McWhorter[4] reports an unusual case in which a large gall stone in the gall bladder was diagnosed by roentgenogram. At operation a large perforation was found between the gall bladder and duodenum and the gall stone was no longer in the gall bladder. There were no signs of obstruction and because of the patient's poor condition the abdomen was closed. Postoperative symptoms of obstruction developed on the sixth day and a roentgenogram showed a shadow in the right abdomen considerably lower than the shadow previously seen but resembling it in every way. Loops of bowel were distended with gas. At the second operation a large gall stone was removed from the terminal ileum. The patient recovered. The gall stone had apparently perforated into the bowel shortly before the first operation.

Stones may pass spontaneously after producing marked symptoms of ileus. The mortality rate is high for cases not operated upon early. The onset of the obstruction in these cases may be obscured by the associated gall bladder disease and the slow development of obstruction. Consequently appropriate treatment is usually delayed until too late to be of any value to the patient. This condition has resulted in a very high mortality rate which is estimated to be over fifty per cent.

CASE REPORT

History: The patient was a married woman sixty-five years of age. She had four children, the last pregnancy being in 1890. Twenty years before she had had an attack of acute abdominal symptoms of unknown nature, but no operation

was performed. In January, 1929, she had an attack of severe abdominal pain for one day but no physician was called. In April, 1929, repetition of the trouble required the services of a physician and hypodermics were necessary for relief of pain. There was severe pain with nausea and vomiting. From that time until her present illness, the patient suffered from obstinate constipation. She was never jaundiced.

Present illness: The patient was seen January 25, 1930, at 5 p.m., complaining of general abdominal pain, which was most severe on the right side. Hypodermic of morphine was given and repeated at 10 p.m. The patient was fairly comfortable during the night and the following morning had a slight bowel action. Subsequent enemas produced no results. The temperature was 99° to 100°, pulse 96 to 108. The pain continued and after consultation a tentative diagnosis of bowel obstruction was made. The patient was removed to the hospital and prepared for operation.

The operation was performed on January 27, 1930, under an ether anesthesia. A long right rectus incision was made. The jejunum appeared in the wound and was very markedly distended. At a point about five feet from the duodenum a hard, round mass was palpated, below which the bowel was empty. The mass was removed through a longitudinal incision and the contents of the bowel drained after the method described by Holden[5], modified to meet the present conditions. Several pints of dark, foul-smelling fluid were drained from the bowel in this way. The wound in the bowel was closed with a purse-string suture reinforced with a Lembert suture. A cigarette drain placed in the abdominal wound, was removed the second day. Because of the critical condition of the patient no exploration of the gall bladder area was attempted. The first day there was vomiting of dark, foul-smelling fluid but this was entirely relieved by lavage with salt solution through a duodenal tube. The wound was slightly infected but closed easily and the patient returned home in fourteen days.

The mass causing the obstruction in this case was a large egg-shaped gall stone 1½ by 1¾ inches in diameter. It was light brown in color with a hard, granular surface. No chemical examination was obtained. This case did not have any outstanding peculiarities. The condition was critical and the results gratifying. The operation should probably have been done earlier. We feel that the procedure of draining the bowel of toxic material was a life-saving measure. This treatment is rational, requires little time and in the opinion of the authors should be used in most cases of high intestinal obstruction.

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ANNUAL MEETING OF THE IOWA TUBERCULOSIS ASSOCIATION

Dr. H. E. Kleinschmidt of New York, director of child health education, National Tuberculosis Association, and Dr. John H. Peck of Des Moines, president of the National Tuberculosis Association, will speak at the annual meeting of the Iowa Tuberculosis Association to be held at the Hotel Chieftain, Council Bluffs, Friday and Saturday, March 3 and 4. The Iowa Heart Association will hold its annual meeting at the same time, and the Iowa Sanatorium Association will hold a quarterly session.

The program promises to be of interest not only to health workers, physicians and nurses, but also to members of lay organizations such as farm bureau clubs, parent-teacher associations, women's clubs and American Legion auxiliaries.

An all day medical session under the auspices of the Pottawattamie County Medical Society and the Iowa Heart Association will be held Friday, March 3. The sessions for the general public will open with a reveiw of the Christmas seal sale and a discussion of next year's campaign methods. At noon there will be a joint luncheon with the Rotary Club. In the afternoon the general session will be devoted to description of various projects in local health work. Dr. Peck will preside at the annual dinner Friday evening, at which the principal address will be given by the Rev. J. R. Perkins. The dinner will be followed by entertainment furnished by the Social Service League in Council Bluffs.

Baby clinics, teeth, child health programs of the Parent-Teacher Association and the American Legion Auxiliary, public health nursing, summer camps, and the relation of unemployment to community health are some of the subjects to be discussed at the general session Saturday morning.

Clark Galloway of the Council Bluffs *Nonpareil* will speak on Health in Print, at a publicity luncheon Saturday noon. John M. Henry, manager of radio station KOIL, will discuss Health on the Air. A city publicity program will be discussed by Phil Ketchum, secretary of the community chest, Omaha, and A State Program, by Cecilia Goodell of the Colorado Tuberculosis Association.

The convention will conclude with a business meeting at which the subject of pending legislation will be discussed by Mrs. B. C. Hopkins of Des Moines. Following the discussion there will be an election of officers and board of directors and a meeting of the board.

STATE HEALTH COMMISSIONER'S PAGE

W. C. Stuelenwerk, M.D.

PURPURA ASSOCIATED WITH INFECTIOUS DISEASE

During the third week of January, the State Department of Health received a call to investigate and aid in taking measures to prevent the further spread of a virulent type of infection which within 48 hours caused the death of two children and within five days the death of the mother and another daughter in this home. A fourth child in the same family, and a neighbor boy who was first of the group to be sick, likewise suffered a severe attack. In all, six cases were reported, four of which terminated fatally.

The illness, as ably described by the attending physician, began in the first patient, an 11 year old boy and only child, with vomiting and chills, followed by fever, a rapid pulse and marked prostration, with delirium in the night. Although hoarse the second day, there was no complaint of sore throat or cough, and the lungs were clear. Purpuric spots, irregular in shape and varying from pea to nickel-sized, appeared at this time on the arms, legs and buttocks. A tentative diagnosis of acute purpura hemorrhagica was made by the attending physician. The patient was hospitalized, given a blood transfusion from the father and recovered. The purpuric spots were well defined a week after onset.

This child was a frequent visitor at the home of the cases which followed, and in which the deaths occurred, the families being neighbors at the edge of town. A baby of four months became acutely ill two days after the neighbor boy, with fever, extreme pain and prostration. Many purpuric areas appeared and the baby died within 24 hours. The next day a three year old boy became ill in a similar manner (including purpura), and died within the course of a day. The mother taking sick with the baby, and complaining of excruciating pain in arms and legs, had fever and severe prostration. Petechial hemorrhages (the areas not exceeding the size of a pea), appeared over her whole body. She rallied under treatment but died suddenly the fifth day. Two daughters thirteen and fourteen, became acutely ill the day before the mother's death, the younger living two days, the other recovering; both showed a purpuric eruption. The father and four other children escaped.

Of what nature was the infectious process in these cases? The answer, highly desirable from all viewpoints, not to mention public concern, is in abeyance, pending a detailed account by physicians and investigators of clinical, laboratory and pathologic findings. The cases resemble the condition "purpura fulminans" described by Dr. Henry Christian in the section dealing with Purpura in Oxford Medicine.

Epidemiologically, current prevalence of the various infectious diseases in the community, is of importance in throwing light upon the causative agent. Inquiry indicated that only a few cases of measles had occurred in the neighborhood in the weeks preceding this very fulminating type of illness. Sporadic cases of diphtheria were under quarantine. No cases of meningitis or smallpox had been reported. (One of the patients who died showed a good vaccination scar.) Scarlet fever was not prevalent, although at least one case of severe throat infection had recently been under medical care. (According to the literature, scarlet fever appears to be most frequently associated with purpura fulminans.) Influenza has been by far the most prevalent disease in the vicinity of the above cases and physicians in attendance were of the opinion that this infection was a chief causative factor. The baby, mother and several other children had suffered upper respiratory infections a week or two before onset of this fatal illness.

It is hoped that this very unusual condition will be reported in detail, as well as other cases of similar or like character which Nature, happily, allows to occur but rarely.

PREVALENCE OF DISEASE

	Dec., 1932	Nov., 1932	Dec., 1931	Most Cases Reported from
Diphtheria	90	72	124	Polk
Scarlet Fever	185	154	186	Polk, Pottawattamie
Typhoid Fever	2	2	8	Jones, Poweshiek
Smallpox	155	68	241	Dubuque, Clinton
Measles	8	9	16	Des Moines, Scott
Whooping Cough	32	47	118	Black Hawk, Woodbury
Cerebrospinal Meningitis	4	3	6	Polk, Linn
Chickenpox	452	498	359	Dubuque, Black Hawk
Mumps	85	82	38	Black Hawk, Allamakee
Poliomyelitis	2	2	12	Calhoun, Tama
Tuberculosis	25	38	21	Linn, Wapello
Undulant Fever	4	4	5	(For State)
Syphilis	149	177	181	(For State)
Gonorrhea	137	186	318	(For State)

The JOURNAL of the Iowa State Medical Society

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MEDICAL ADVANCEMENT IN 1932

An Epitome

The following medical headlines mark the steady trend of medical progress during the year 1932:

GENERAL NEWS

The Nobel prize in medicine was awarded to Sir Charles Scott Sherrington, of Oxford, and Professor Edgar Douglas Adrian, of Cambridge.

The growth-promoting vitamin A was synthetically produced by splitting carotene.

A new pain-relieving drug five times as potent as morphin was synthesized.

Round and rod-shaped forms of bacteria demonstrated in a single life cycle of a bacterium.

Dr. William L. Russell of Cornell selected as Thomas W. Salmon Memorial Lecturer for 1933, by the New York Academy of Medicine.

A protective vaccine against yellow and typhus fevers developed.

Inadequate calcium, phosphorus and vitamin D demonstrated as the chief causes of tooth decay.

Prolactin and anterior pituitary products used to artificially control milk secretions.

The National Academy of Sciences' Public Welfare Medal was given posthumously to Dr. Wickliffe Rose.

Pasteurization of milk accomplished by extremely high-pitched, audible sound waves.

Filtrable viruses thought to be plastic and transparent forms of ordinary germs.

Spinal anesthesia predisposes to postoperative atelectasis of the lungs.

The gold medal of the American Medical Association was awarded to Drs. Frank A. Hartman, C. W. Greene, J. J. Maisel, and G. W. Thorn for their original work on the development and use of a hormone from the suprarenal cortex.

Urography accomplished by oral administration of dye.

Scaleniotomy immobilizes apex of lung in pulmonary tuberculosis.

Vaccines are made from bacteria exploded in an atmosphere of carbon dioxide.

The brain can oxidize alcohol as well as lactic acid.

The Remington Medal of the American Pharmaceutical Association awarded to Eugene G. Eberle, of Baltimore.

The rate of growth in human beings is an hereditary trait.

A second respiratory ferment found and studied.

Catgut exonerated as cause of tetanus by finding of high percentage of bacillus Welchii carriers in both urban and rural population.

One-tenth of institutionalized cases of mental deficiency have their origin in birth injuries.

Malaria treatment of paresis unsuccessful with negroes.

Sex of the unborn child may be determined by the action of a new hormone demonstrated in the mother's urine.

Sorcin, derived from castor oil, neutralizes snake venom.

English observers claim that radium therapy is as effective in treatment of carcinoma of the breast as surgery.

Urinary infections from B. Coli may be controlled by a high ketogenic diet.

Dr. O. T. Avery was awarded the John Phillips prize by the American College of Physicians for his research on the pneumonia organism.

Following a study of over six hundred epileptics and their families, conclusions are drawn that epilepsy is not an inherited disorder.

Hodgkin's disease successfully treated by the x-ray.

Mosquitoes may carry tularemia.

Ultraviolet radiation produced within the body by injecting organic solution excited by x-ray.

Intra-urethral prostatectomy revived with new instruments and new technic.

Lead poisoning is detected by x-raying long bones of the body.

Otosclerosis found to be inherited as a sex-linked characteristic.

The common cold, as such, lasts only three or four days, and gives immunity for three months.

Dr. John J. Abel of Johns Hopkins was elected president of the American Association for the Advancement of Science.

The brain of the scholar has a better blood supply and composition than that of ordinary men.

Mucin proved efficacious in the treatment of chronic gastric ulcers.

Iodin compounds in the circulating blood stream may control sleep in man and hibernation in other animals.

Loss of the entire vision centers of the brain still leaves the animal sensitive to light.

Septicemia successfully treated by bacteriophage.

In destroying cancer cells the x-ray does so by producing premature senility of the cell.

The auditory nerve does not respond to electric current even when of the same form and frequency as sound waves.

A new male sex hormone affects pituitary and adrenal gland secretions.

Epilepsy may be caused by the loss of potassium in brain tissue.

Visualization of the liver and spleen accomplished by injecting phorium dioxide and photographing with the x-ray.

IOWA NEWS

Mental hygiene clinic provided for Davenport by State University of Iowa.

Cedar Valley Hospital staff contributed $1,200 worth of professional services to the Charles City Community Relief Fund.

Two hundred and six Iowa educators, public officials, physicians, and social workers participate in Iowa White House Conference on Child Health and Protection.

New Veterans' Hospital located in Des Moines.

A $20,000 addition to the Children's Hospital, State University, houses the orthopedic clinic, the dental clinic, the drug department, and the business office.

Supreme Court rules as constitutional the law providing that persons without a license can be enjoined from the practice of medicine.

Eight young women were graduated from the State University of Iowa College of Medicine.

Fifth consecutive record set at State University of Iowa when 1,112 degrees were granted June 6. Ninety-three were physicians.

Dr. A. A. Johnson of Council Bluffs appointed to Iowa State Board of Medical Examiners.

Increase of 22.7 per cent noted in enrollment of medical students at Iowa City for 1932.

Council Bluffs Medical Society contributes $500 for Council Bluffs unemployment relief.

Gain of 40 per cent in nursing school students at Iowa City.

New hospital opened in Buffalo Center.

THE MINORITY REPORT
of the Committee on the Costs of Medical Care

In considering the final report of the Committee on the Costs of Medical Care* it should be borne in mind that this committee came into existence to study means for providing an adequate, scientific medical service to all people, rich and poor alike, at a cost which they could reasonably meet. This avowed objective declared by imputation that medical service as rendered today was not an adequate, scientific medical service, that it was not rendered to all persons, rich and poor alike, and that it was not delivered at a cost which could be reasonably met by these persons in their respective stations in life. In other words, the committee assumed the present system of practice to be inadequate and obsolete. If convinced of the uselessness of the present plan of practice, it was entirely logical that they should proceed to develop a new scheme of practice differing in organization and operation from the present plan.

RECOMMENDATIONS OF THE MINORITY GROUP

I

The minority recommends that government competition in the practice of medicine be discontinued and that its activities be restricted (A) to the care of the indigent and of those patients with diseases which can be cared for only in governmental institutions; (B) to the promotion of public health; (C) to the support of the medical departments of the Army and Navy, Coast and Geodetic Survey, and other government services which cannot because of their nature or location be served by the general medical profession; and (D) to the care of veterans suffering from bona fide service-connected disabilities and diseases, except in the case of tuberculosis and nervous and mental disease.

II

The minority recommends that government care of the indigent be expanded with the ultimate object of relieving the medical profession of this burden.

III

The minority joins with the Committee in recommending that the study, evaluation, and coordination of medical service be considered important functions for every state and local community, that agencies be formed to exercise these functions, and that the coordination of rural with urban services receive special attention.

IV

The minority recommends that united attempts be made to restore the general practitioner to the central place in medical practice.

V

The minority recommends that the corporate practice of medicine, financed through intermediary agencies be vigorously and persistently opposed as being economically wasteful, inimical to a continued and sustained high quality of medical care, or unfair exploitation of the medical profession.

VI

The minority recommends that methods be given careful trial which can rightly be fitted into our present institutions and agencies without interfering with the fundamentals of medical practice.

VII

The minority recommends the development by state or county medical societies of plans for medical care.

Disregarding the proved principle that the mold of human thoughts is changed only by slow processes and that evolution consists in satisfying needs as they arise, the committee plunged into its task, and agreeable to the trend of modern thought, developed an entirely new plan savoring strongly of socialism and big business. Confusing size and power of organization with excellence and efficiency in service they offered a plan of mass production in medical service, admittedly idealistic and based solely upon theory. The plan is both revolutionary and reactionary. Its revolutionary character is strikingly manifest in the fact that it destroys individual or private practice. It assumes the grouping of salaried physicians around a central hospital managed by lay experts in finance and administration, "who will give their services without charge," supported and thereby controlled by the federal government, and paid for by fees from the individual, his employer, and from the general tax fund—in short, a system of group practice sustained by group payment. The shortcomings of such a system have been touched upon in a previous editorial. Suffice at this time to state that it is apparent that the proposed plan is not only inadequate in meeting the demands of efficiency or economy, but pernicious in its effects upon the high standards of the medical profession, and entirely inimicable to the welfare of both the patient and the physician. That the system would provide an adequate, scientific medical service is further doubted since the system destroys the initiative necessary for scientific advancement. Finally it is impossible even by wide reaches of the imagination to conceive of such a plan operating under government control in which "the spoils system" would not destroy efficiency, and federal management materially increase operation costs.

We are advised by the committee that the

Editor's Note: In two earlier issues of the Journal the final report of the Committee on the Costs of Medical Care has been discussed editorially, presenting a general survey and summary of the report (December, 1932, page 597) and discussing the recommendations of the Majority Report (January, 1933, page 29). It is the purpose of this editorial to discuss critically and analytically the recommendations of the minority group of the committee. We believe that the recommendations furnished in the Minority Report will more effectively serve the needs of the public in general and likewise more adequately serve the purposes of the medical profession.

*Report published by the University of Chicago Press, Chicago. Price $1.50.

average cost of such a system per person would range between twenty and forty dollars per year under ideal conditions. Starting with new and paid for hospitals, manned by low salaried physicians, administered by a volunteer force of philanthropically inclined experts in finance, and divested of the traditional waste accompanying federal expenditures, these figures might be adequate. The committee's own findings, however, of the operation of a comparable plan by our European neighbors indicate the wide deviation from the ideal to be expected and painstaking search of the report indicates no estimates of the costs of service after the inevitable break-down in this idealistic plan. Cost would rise proportionately with inefficiency and ineffectiveness, and the second part of the committee's work, namely, that of furnishing a medical service to rich and poor alike at a cost which can be reasonably met by them, would be defeated.

The plan is not evolutionary but revolutionary, and would so disorganize the efficient operation of medical practice that service to the public would be paralyzed. To overcome these objections the committee readily agrees that this concept of medical practice has been planned for future generations. Can it be that they are unaware of the futility of such a plan? Law has long recognized that it is impossible for even the wisest to plan beyond a single generation, and has enacted legislation which prevents silly attempts toward such an end in dealing with trust estates or the making of wills. Can we assume superior wisdom and a knowledge of the medical needs of the future with sufficient certainty to offer a plan for the conduct of medical practice a half century removed? If the medical profession and the public at large receive no other benefits from this five years of labor than the short-sighted plan of medical practice discussed above one would certainly be justified in assuming that the million dollar hen had sat upon an empty egg. The fact remains, however, that the impractical recommendations of the majority group as expressed in the final report are but the illogical conclusions deduced from a wealth of facts collected by the committee.

The minority group of the committee felt that the researches of the committee did not warrant these conclusions, and this group drew up recommendations designed to protect the individual practice of medicine and restore the general practitioner to the central place in medical practice. Convinced that governmental sponsorship of medical practice is not only unsound in principle, but unworkable in practice, the Minority Report recommends that governmental competition in the practice of medicine be discontinued, and that active measures be taken to abolish those bureaus of the government which in their operations engage in the practice of medicine, except those dealing with the medical service of the army, navy, coast and geodetic survey, and veterans' service. This recommendation, if followed, would curb the ever-increasing activities of the federal government in the participation of the practice of medicine.

During the past decade, in the wild scramble to acquire a degree of popularity and thereby secure necessary votes for election, some of our law-makers have wandered far from the usual fields of political hokum on tariff and farm legislation, offering their constituents not only free garden seed, but also free medical treatment. Like the snowball rolled at the top of a hill this activity has gained momentum and proportion down the hillside of the past hectic years, until today free medical service and examinations are offered to most federal, state and municipal employees. Veteran service was extended, first, to include disabilities contracted by veterans since the World War, and finally, to include the families and dependents of veterans of the World War. Today twenty-five cents out of every dollar collected by the federal government is expended in veteran relief. It is not the thought of the Minority Report to question in any way the relief offered to veterans suffering from bona fide service-connected disabilities and diseases, but the protest is rightly registered that governmental fraternalism exceeds governmental wisdom and the governmental prerogative when for political reasons relief is extended beyond this group.

In acute realization of the imposition which the care of the indigents make upon the medical profession the minority group definitely recommends that the government expand its agencies to relieve the profession of this enforced charity. Until the time arrives when the baker, the butcher, and the candle stick maker are willing to enter into a socialistic program offering to the indigent, free bread, free meat, and free lights, it does not seem reasonable to suppose that the physician should be singled out to serve without remuneration. At this writing there appears to be no visible enlargement of the heart towards the indigent except among the ranks of the medical profession.

As previously pointed out, the essence of the Majority Report, in so far as medical practice would be altered, was embodied in two provisions: first, that a group plan of practice be developed, and second, that payment for medical service be made on a group basis. The Minority Report

vigorously challenges these two recommendations. In challenging group practice the Minority Report does so with reservations. They believe that group practice engaged in by individuals voluntarily banded together to render a more efficient service, managed and controlled by their own members, in many instances may be conducive to better service. They do object to group practice organized and dominated by the government, regulated by lay individuals unfamiliar with the many problems of modern medical practice, in which the individual physician functions as an employee of the government rather than as a private individual.

In full realization of the shortcomings of a socialistic plan of medical practice the minority group offered certain recommendations for a less radical, but apparently more efficient development in medical practice centered about the general practitioner. The weakness of the Minority Report lies in their failure to recommend a complete and detailed plan of medica practice. Strangely, the strength of their recommendations may also lie in this fact, since by outlining only principles which should regulate the natural evolution of medical practice, they have allowed ample leeway for the many unanticipated emergencies and conditions which may arise long before future generations are called upon to face the problems of medical practice.

Maintaining an attitude of practical utility the minority committee has suggested progressive changes in the present system rather than offering new methods of organization and practice. They believe that the government should not extend its activities into those fields which can be effectively serviced by the private practitioner of medicine. They point out that the county society, approved by and under the supervision of the state and national societies is a proper unit of organization to attempt an experiment in group practice. They exemplify this statement by citing the experiments now being conducted by various county societies in Iowa for caring for the indigent of the county as a society project. Certainly it seems logical to assume that this minimal and basic organization of physicians, representing a single community, and appreciating the needs and peculiarities of that community, is the logical one to assume the responsibilities for the medical care of such a group. Eligibility of physicians to participate in the plan would be that of admission into the county medical society, assuring every honorable and competent physician a place in the system. It would not assume that all communities require or would have the same amount of medical care, or perhaps even the same skill in medical practice. It does not assume, as does the Majority Report, that a standardized service is required, or that every individual should have only the ultimate of medical service at minimal cost. Parcelling out medical service in standardized units according to such a plan and without due consideration to other factors, seems no more logical than furnishing every motor-minded citizen with a Lincoln automobile on the basis that every one should have the best regardless of their needs or ability to purchase. Perhaps our government is ready to assume such a fraternalistic attitude toward the general public, but one can scarcely believe that the public is ready or willing to bear the burden of taxation which such a plan would require.

Does it not seem more simple, more rational, more evolutionary to consider a plan of medical practice fitted into our present institutions and agencies, which will assuredly render a high-type medical service at a reasonable cost, permitting free choice of physician to every patient, and not interfering with the fundamentals of medical practice? Is it not far better to permit the American citizen to pick his own doctor and his own hospital, to pay his own bills with his own money, and be responsible to a doctor who is responsible to him?

The plan of either the majority group or the minority group is not ours to accept or reject. This prerogative lies with the American people. The physician should study, should learn, should acquire the necessary knowledge so that he may be prepared for that leadership in medical practice which will lead the public out of the wilderness of doubt and misgivings concerning their medical confidant, and deliver them into the promised land of excellence and efficiency in the scientific practice of the medical arts, commensurate with the tremendous advances constantly being made in medical science. Physicians must intelligently discuss the problems of communal need in medical service, and must weigh the demands of their particular clientele in terms of modern economic and social standards.

With such a background of facts and with the interests of the community ever in the foreground, organized medicine must pave the way toward the solution of this vital problem of rendering to every citizen and in every community an adequate medical service at a reasonable cost.

WAMESO LODGE

*The accompanying story of Wameso Lodge, the home of the Waterloo Medical Society, so vividly pictures the material and fraternal rewards of unity and cooperation in the conduct of a worth while medical society that we believe the readers of the Journal will profit by this report. That the program which made possible this society home is a timely one is borne evidence by the Minority Report of the Committee on The Costs of Medical Care, which cites, "We believe that the county society approved by and under the supervision of the state and national societies is the proper unit of organization to attempt such experiments" [plans for future medical care].**

Wameso Lodge was erected in 1932 as a meeting place for the Waterloo Medical Society, and as a recreational center for its members. Wameso is a word coined by taking the first two letters of each word—Waterloo, Medical and Society, thus making the word Wameso. In April, 1905, the Black Hawk County Medical Society entered into a contract with the Board of Supervisors to render the necessary medical aid to the poor of the county for one year for the agreed consideration of $830. After operating under this plan for two years the physicians of the other cities in the county preferred to make their own arrangements for caring for the poor in their own respective townships. In accordance with this change the Waterloo Medical Society in 1907 entered into a contract with the board to render all necessary medical services for the poor in the city of Waterloo and the two townships in which it is located, for the stipulated annual consideration of $600, payable quarterly. This contract has been renewed each subsequent year at an agreed price; this year for $3,500.

The Waterloo Medical Society was organized in 1900. Its primary object was to promote friendship and to encourage a spirit of sociability among its members, and to enable its members to keep in closer touch with local matters and conditions of interest to them individually and as an organization. The society was incorporated in January, 1913, not for pecuniary profit, in accordance with Title Nine, Chapter Two of the Code of Iowa, at which time amendments were added and the articles enlarged to meet new demands. The purpose of this association is to carry on the principles and the high ideals of the pioneer organization, and are stated as follows:

To cultivate a feeling of good fellowship among the members; to stimulate the study of scientific medicine and a greater interest in current medical literature; to provide a suitable meeting place and library for the members; and to protect and fur-



Wameso Lodge

* Medical Care for the American People, Final Report of the Committee on the Costs of Medical Care, University of Chicago Press, Chicago, page 180.

ther all matters pertaining to public health and hygiene.

With the proceeds received from the county, instruments have been bought and maintained at three hospitals, a club room was leased and the first clinical laboratory in the county was equipped. Roentgen ray laboratories were installed in two hospitals and equipped with the latest apparatus, which is owned jointly and equally by the hospitals and the society. The clinical and x-ray laboratories were manned for a few years by physicians who were trained in these branches, but were later sold to an individual who has since operated them privately. The depression and consequent unemployment of the last few years has greatly increased the work among the poor, and caused considerable unrest among the members of the society. Many have justly felt that we were doing too much work for the compensation received. However, the Board of Supervisors, by reason of the unusual demands made upon them under existing conditions were unable to increase the compensation, and pleaded with the trustees to see them through these trying times. Our society, keenly appreciating the economic conditions, felt disposed to do their full share and made no further demands for increased remuneration, but decided that the time was ripe for action in bringing its members together for the common good. During all these years no physician personally received one cent for his services to the indigent of the county. The only benefit derived was from the use of the laboratories and instruments, dues paid to the state and the national organizations for the last four years, and the scientific knowledge gained from attendance at meetings. These meetings are held monthly from September to June of each year, and are usually addressed by some outstanding man in the profession. The expenses of those on the program as well as those attending the dinners are paid by the society and our meetings are well attended by men from throughout the state. The largest attendance was 256, but our average is around 70, about half of whom are usually visiting physicians.

Each year the small surplus which we had was invested in bonds and building and loan stock. In an effort to make our members feel that their work in behalf of the poor was not without some compensation, it was suggested by one of the members that we purchase a tract of land and erect a lodge on it. This proposal met with little favor at first, but it gradually appealed to more and more until now we have 96 per cent enthusiastically with us. The site selected was a high four-acre wooded tract on a bluff overlooking the picturesque Cedar River within twelve minutes' drive from the business section of the city. The main lodge room is large enough for our average meetings. In addition to this room, the Lodge includes a dining room, a kitchen, a furnace and fuel room, men's and women's rest rooms, and a porch twelve feet wide, extending the full length of the Lodge room. Since the Lodge has been erected, the wives of the members have entered wholeheartedly into the movement by forming an auxiliary and holding meetings concurrently with ours. In addition to our regular business sessions we plan various forms of indoor entertainment, namely dancing, card parties, ping pong games, etc. We have a beautiful wooded tract immediately surrounding the Lodge equipped with eight outdoor stoves and tables, and studded with electric lights, with the river accessible for boating and fishing, thus making an ideal place for outdoor picnics and gatherings.

The use of the Lodge is restricted to physicians and their wives. Other members of the family must be accompanied by the physician or the physician's wife who will act as chaperon.

As a further protection each member of the society has purchased group insurance in the amount of $1,000, payable at death. This was made possible by the county paying the premium and deducting it from our annual payment.

Since the completion of this plan as above outlined, the spirit of good fellowship has developed to a degree beyond our fondest anticipations; our wives have become better acquainted with each other and the present status of our Lodge and our association promises that our plans and labors on the banks of the Cedar will be rewarded a hundred fold.

WOODBURY COUNTY SOCIETY DISCUSSES MEDICAL ECONOMICS

The attention of the physicians in northwestern Iowa is called to the meeting of the Woodbury County Medical Society in Sioux City on Thursday, February 23. At that time the Woodbury County Society is conducting a medical economics program, similar to the one held by the Polk County Medical Society on January 31. Oliver J. Fay, M.D., of Des Moines, will present a paper on "A Discussion of the Final Report of the Committee on the Costs of Medical Care."

The meeting will be held at the Martin Hotel in Sioux City. Reservations for the 6:30 dinner (75c) may be made with Lawrence E. Pierson, M.D., secretary of the society. A cordial invitation is extended by the Woodbury County Medical Society to all doctors interested in the problems developed in this report.

FINAL REPORT OF THE COMMISSION ON MEDICAL EDUCATION

During the past few months two unusually noteworthy and significant investigations into medical practice have been brought to a conclusion. The one, conducted by the Committee on the Costs of Medical Care, deals entirely with the economic aspect of medical practice, investigating ways and methods of rendering an efficient medical service at a reduced cost. The second investigation, conducted by the Commission on Medical Education, has dealt with the problem of securing medical service of high quality. The final report of the former committee has been reviewed in earlier editions of the JOURNAL, the third and last review appearing in this issue. The latter report cannot adequately be summarized within the compass of this editorial, but it is hoped that a few of the outstanding findings and recommendations of the committee will be of benefit to those physicians not having access to the complete report.*

That this final report represents the thoughtful opinion of competent investigators is assured by knowledge of the personnel of the commission. Under the full time directorship of Willard C. Rappleye, M.D., eighteen outstanding medical educators including A. Lawrence Lowell, president of Harvard University, as chairman of the committee, have conducted this painstaking investigation. Iowa was represented on the commission by Dr. Walter L. Bierring of Des Moines and President Walter A. Jessup of Iowa State University.

The Commission on Medical Education was organized in 1925 by the Association of American Medical Colleges, with the avowed purpose of making a study of the educational principles involved in medical education and licensure, and to make suggestions which would bring them into a more satisfactory relationship with the newer conceptions and methods of university education. It was believed that such a study would assist the efforts directed toward the development of a program adapted particularly to the educational, economic and social conditions in this country.

The final report further indicates that the purpose of the study was not to propose recommendations or new regulations, but rather that the proper emphasis on education principles in medical training and licensure can be secured only by modifying the point of view and broadening the interests of those responsible for medical education and licensure.

The approach of the study was somewhat different in nature from the usual surveys of this problem in that the ultimate purpose of medical training was always kept in mind. The public aspects of medicine were expansively considered, and the influence of economic trend, current tendencies in medical practice, specialization, and the importance of health were further determining factors as to whether present educational methods are adequate for the present and future medical needs of this country. Interesting facts are presented of existing problems of medical care, incomes of physicians, sickness insurance and industrial medicine. The commission's survey indicates that the practice of recent graduates shows a distribution of eighty-five per cent for office and home visits, and that only ten per cent require hospital care. About eighty-five per cent of the office and home visits were for minor surgery, acute infections of the upper respiratory tract, general medical disorders, venereal diseases, and obstetrics. This observation is vitally important since an understanding of the medical needs of the population, and the qualifications necessary to deal most effectively with those needs, should constitute the real basis of medical training.

The distribution of recent medical graduates for the classes of 1920 and 1925 showed that 49 per cent and 51 per cent respectively have located in cities of 100,000 to 500,000 or over, while 50 per cent and 47.5 per cent have located in communities under 100,000, representing 70.4 per cent of the entire population of the United States. The report indicated that there was an over-supply of physicians in this country, and that this over-supply constituted a problem of grave concern. The ratio of physicians to the general population is estimated at one to eight hundred. In some of the larger centers the proportion is as low as one to three hundred.

From the study of medical licensure in this country the significant statement is made that the development of licensure under state boards has to a large extent detached it from the educational program. It is urged by the commission that with changed conditions the license to practice be granted directly on the basis of graduation from a medical school which provides an adequate standard of education, and on completion of a satisfactory interneship. This program should be adequately safeguarded by laying down minimal educational standards and through inspections and visits to the various medical schools by competent observers. The adequate medical course of study is one which renders the student competent in the fundamentals of medicine, and is to be regarded only as the beginning of the education of the physician. He must remain a

*Published by Columbia University Press, New York City. Price $2.00.

student throughout his life. Medical education is shifting from a vocational training, which in the recent past has been largely didactic and descriptive, to a scientific discipline, the aim of which is to provide the student with an understanding and insight into the mechanisms and fundamental changes in diseases, in disease processes and with a direct personal experience in the laboratory and at the bedside. It is not an isolated field, but an integral part of university education and must be closely correlated with the other major divisions of learning.

Medical education as practiced in Europe has been comprehensively studied, and it is stated that the most characteristic features of medical education abroad are the vast responsibilities placed on the student for his own training and the flexibility of the courses of instruction. The training in all countries is focused upon producing a competent, thorough, safe general practitioner.

In the final summary of their report the commission recognizes that social changes in modern society due to industrialization are placing new responsibilities upon medicine. The happiness and prosperity of a people are largely dependent upon mental and physical vigor. The physician today needs to be an adviser in regard to health as well as a healer of disease. The greatest health problem of the country is that of making modern medical services available to the entire population. This five year study of medical education will serve a most useful end. Facts have been collected which will give an authoritative background to the study of future problems. The weaknesses and strength of the present educational system may be measured by this yardstick, and appropriate remedies applied. New standards of medical education based upon a new order of community needs will be developed. Medical leadership and the control of medical problems may well be expected to continue because of the influence which adequate medical training will have upon those individuals completing a modern medical course of study.

JOSEPH FRANCOIS FELIX BABINSKI

Joseph Francois Felix Babinski, without question the outstanding neurologist of his time in all France, died at his home in Paris, October 30, 1932. The cause of his death was paralysis agitans. His parents came from Poland to Paris, where Joseph was born November 17, 1857. When twenty-eight years of age he was graduated from the University of Paris. That Babinski was interested in the study of the nervous system and its attendant diseases, even as a student of medicine, is indicated by the fact that his graduating thesis was on multiple sclerosis. At that time the far famed Charcot was chief of the clinic at the Salpetriere, in which institution, in 1872, the chair of clinic of diseases of the nervous system had been created for this distinguished French neurologist. Under the magnetism of such a teacher, it is little wonder that young Babinski become intensely interested in clinical neurology. That such was the case seems evident from the fact that Babinski became chief of Charcot's clinic soon after his graduation from the university. This association continued until the death of Charcot, which occurred in 1893; after which time Babinski fell heir to his former chief's work at the Salpetriere.

It was about this time that Babinski discovered a clinical entity which undoubtedly had been observed numberless times by clinicians without the phenomenon apparently attracting their attention. He was the first to describe the extensor toe reflex and to correlate its significance to organic neurology.

In a preliminary note, which he read before the Societé de Biologie, February 22, 1896, this then unknown student of neurology, in rather simple words, described the metatarsal extension of the toes to plantar stimulation which occurred in certain cases of paralysis. After two years of continued investigation, he amplified his previous report by presenting a fuller and more complete dissertation on the pathologic reflex phenomenon in its relationship to normal plantar flexion.

Thus was born, in the cradle of French neurology, the sign which made Babinski's name known wherever neurology is taught; the theory which helped to perpetuate the French school of teaching, made famous by his predecessor, Charcot. The extensor toe sign of Babinski is truly pathognomonic of a lesion or irritation involving the leg fibers or their cells in the corticospinal pathway of the central nervous system of man and in the higher anthropoids. Although other methods for eliciting extensor toe signs have been reported from time to time since Babinski first described his sign over a third of a century ago, (Oppenheim, Gordon, Chaddock, Throckmorton, Craft,) none of them have replaced it in the field of neurologic diagnosis. This contribution to neurology, alone, will continue to make Babinski's name foremost among the contributors to this branch of internal medicine.

T. B. Throckmorton, M.D.

THE MAJORITY REPORT

(Tune—We Want Cantor)

The Ph.D.'s and M.D.'s
Are having quite a scrap
About the cost of sickness,
And who shall bear the rap?

Oh!
When I'm in Washington,
When I'm in Washington,
I'll name a peace commission
When I'm in Washington.

The Ph.D.'s say "Something's wrong."
The M.D.'s say—"Not us."
The preachers and the lawyers
Might clarify the muss.

Oh!
When I'm in Washington,
When I'm in Washington,
I'll limit the professions
When I'm in Washington.

The Ph.D.'s extoll the "group."
There's so much in a parley.
Sometimes it works; sometimes it don't.
How come? "Vas you dere Scharley?"

Oh!
When I'm in Washington,
When I'm in Washington,
I'll curb distorted findings
When I'm in Washington.

The Ph.D.'s suggest a tax.
Relief is paramount.
No matter if a "taxed to death"
Is added to the count.

Oh!
When I'm in Washington,
When I'm in Washington,
I'll never sign such tax bills
When I'm in Washington.

—An Iowan Physician.

TELESCOPIC SPECTACLES

False hope has been created among many blind people, as well as their families and their friends throughout the United States, by the widespread newspaper publicity given to the announcement in Chicago on December 18 that telescopic spectacles have been perfected which can restore vision to 40 per cent of the present classified blind population. In response to the numerous inquiries on this subject, two national organizations for the blind* have sponsored the following statement, based on their investigations:

The experience of ophthalmologists who have done much work with telescopic spectacles indicates that the true percentage of those now classified as blind who can be helped by the use of this device, but who cannot be helped by ordinary spectacles, is not 40 per cent, but much less than five per cent. The assumption that practically all cases of low vision are capable of being improved by mere enlargement of the images on the retina is false. The group of the "near-blind" includes a large number of persons whose vision is obstructed by opacities, of persons whose optic nerves or retinae have lost practically all sensitiveness, of persons whose eye diseases would be aggravated and blindness precipitated by excessive use of the eyes, and many others who cannot be helped by any optical device.

Moreover, it happens frequently in the experience of ophthalmologists that a person to whom the physician is able to give improved vision with telescopic lenses is unable to actually make use of them in daily activities. The unfounded claims regarding the extent of their usefulness is particularly unfortunate in that it raises false hopes among the blind. Persons who are helped may find them a great boon, but the number of such persons is relatively small.

There is really no "great discovery" in the use of magnifying glass for spectacles. The first attempts to improve vision by applying the magnifying principle of the telescope to spectacles were made about 300 years ago. For more than 20 years, American ophthalmologists have been using telescopic spectacles in their regular practice.

The only change now proposed is the substitution of cylindrical lenses for the usual spherical lenses enlarging the vertical dimensions of images by 30 per cent, while enlarging their horizontal dimensions 80 per cent. It is claimed that this will improve the patient's ability to judge distance and space correctly, and thus make it easier and safer to walk about while wearing the spectacles. Upon examination, this claim does not appear to be justified for several reasons.

In the first place, objects will appear closer than they actually are. Moreover, the use of cylindrical lenses produces distorted or blurred images in which objects appear broader in proportion to height than they actually are. The use of cylindrical lenses in this way is not new and ophthalmologists who have tried it have not found it any improvement.

More important, it is pointed out by ophthalmologists that the use of cylindrical lenses cannot obviate other inherent defects in telescopic spec-

*American Foundation for the Blind, Robert B. Irwin, Executive Director, 125 East 46th Street, New York City.
National Society for the Prevention of Blindness, Lewis H. Carris, Managing Director, 450 Seventh Avenue, New York City.

tacles which affect their usefulness, such as the limitation in the field of vision, the apparent movement of objects on turning the head, the necessity for keeping them in adjustment, the impossibility of using the same lenses for both near and distance vision, not to mention the weight and conspicuous appearance of the device. It therefore appears that the "new development" does not constitute any real improvement which would make the spectacles any more widely applicable for improving the vision of persons with low vision than the types of telescopic spectacles now in use.

PSYCHOBIOLOGY

It is not often that priority is claimed by a layman in the use of a new concept in medical practice. Such a claim, however, has recently been made by Nicholas Trott in the use of the term and concept of psychobiology. This author, whose book* appeared in the early part of 1932, employs as one of his chief characters a mythical professor of psychobiology at Amherst College and has employed in the furtherance of his plot certain of the fundamental concepts of this new science.

Medical attention was first directed to this science by Dr. Adolf Meyer, Professor of Psychiatry at Johns Hopkins University, in a Salmon Memorial lecture delivered last spring. In a plea for the recognition of psychobiology as a new science of the study of man in his entirety, Dr. Meyer defines psychobiology as the science which attempts to understand and describe man as we understand and describe any object of natural history without cutting out man's essential nature as behaviorism does. "In this way," Dr. Meyer states, "the investigation can do justice to all the facts, whether they be those of physics and chemistry or of the growth and function of special organs or of the functioning of the whole person. It thus becomes possible to give the necessary consideration to the parts without losing sight of the unity of the person."

*Monkey Boat, A Murder Mystery, by Nicholas Trott, published by The Macmillan Company, New York City.

AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY ANNOUNCES EXAMINATIONS

The American Board of Obstetrics and Gynecology proposes to hold the first of a series of annual dinners for Diplomates of the Board and their friends on the first day of the Scientific Session of the American Medical Association meeting in Milwaukee, at which time the successful candidates from the examination of the day before will be introduced in person. The next written examination and review of case histories will be held on April 1, 1933. The next general clinical examination is to be held in Milwaukee on Tuesday, June 13, 1933. For further information and application blanks, address the Secretary, Dr. Paul Titus, 1015 Highland Building, Pittsburg, Pennsylvania.

University Hospitals
MONTHLY CLINIC
Friday, February 17, 1933

10:00 to 11:00 A. M.
Surgery—Surgical Amphitheater

11:00 to 12:00 A. M.
Obstetric and Gynecologic Clinic—
Surgical Amphitheater

12:10 P. M.
Luncheon—Doctors' Dining Room

1:00 to 2:00 P. M.
Medicine—Room E-405

2:00 to 3:00 P. M.
Orthopedics—Children's Hospital

A FOUNDATION IN PUBLIC HEALTH AT THE UNIVERSITY OF MISSOURI

The disciples and former students of Dr. Andrew W. McAlester, for many years dean of the School of Medicine of the University of Missouri, have joined to establish this foundation to honor and perpetuate his name in service to all the people of the state of Missouri.

The foundation will function through and under the auspices of the University of Missouri. The curators of the university are the custodians of the endowment funds to be invested by them and the income will be disbursed by the managers of the foundation.

The plan of action and its scope encompass an endeavor to teach medicine or health science to lay people. Eventually full-time public health men will travel over the entire state teaching health and preventive medicine in schools and to lay societies as well as training health units and groups of teachers in colleges. They will cooperate with the state board of health in an educational way in order to control epidemics and infections in local communities.

SPEAKERS BUREAU ACTIVITIES

MEETING OF MERIT

January, 1933

The honor of the "meeting of merit" for the month of January goes to the Polk County Medical Society. On Tuesday, January 31, 1933, their regular monthly meeting was held at the Hotel Fort Des Moines. The program feature was a comprehensive discussion of the recent report of the Committee on the Costs of Medical Care by Oliver J. Fay, M.D., of Des Moines. Doctor Olin A. West, Secretary of the American Medical Association, who served as a member of the Committee on the Costs of Medical Care, was invited to attend the meeting and discuss the report.

Invitations to the meeting were sent to every member of the state society. The interest of the doctors throughout the state in the problems arising as a result of this report was manifest by their splendid attendance at the meeting. Between four and five hundred doctors from all parts of the state were present in spite of unfavorable weather.

A six o'clock dinner honoring Doctor West, preceded the meeting, and was attended by 150 members of the Iowa State Medical Society. The program began promptly with the presentation of Doctor Fay's paper—a detailed, yet concise analysis of the recommendations of the majority report of the committee. At the close of this paper, which received probably the greatest ovation ever accorded a paper at any medical meeting, Doctor West discussed the report and the committee, and a discussion of Doctor Fay's paper was given by Doctors Russell C. Doolittle and Joseph Brown, both of Des Moines.

The enlightening discussion of this report at this meeting should be disseminated throughout the state by the members who attended and it is hoped that each county medical society will take an active part in the consideration of this report and the problems it presents.

WAPELLO COUNTY

Radio Programs

The Wapello County Medical Society is already well known throughout the state for its splendid medical programs at county society meetings. Local men are used and the papers are of the highest quality. The interest and enthusiasm of the Wapello County men about the plan and their high average of attendance testify to the success of the project which has been in effect several years.

A new activity of this society is worthy of publicity. The Wapello County Medical Society has assumed the responsibility for the health talks over radio station WIAS at Ottumwa. This includes three fifteen minute periods a week—Monday, Wednesday and Friday. On Monday and Wednesday, regular talks are given and on Friday questions on the subjects of health sent in by radio listeners are answered. The project has been in operation for about two months. All the talks are prepared and presented by members of the Wapello County Medical Society.

This is a highly commendable activity which the Wapello County men have undertaken. The medical profession is the logical group to broadcast health messages. Other societies in whose territory radio stations are located are urged to make similar arrangements with the managers of the stations.

Tune in on the health talks broadcast by the Wapello County Medical Society over WIAS Monday, Wednesday and Friday at 9:00 P. M.

DISTRICT MEETING

Another very successful "home-talent program" district meeting was held at Clarion, January 27, when the second district medical society assembled for its third district meeting. The following program was presented by some of the younger men in the district: Food Allergy, Ralph W. Beardsley, M.D., Livermore; Radical Cancer Surgery, R. W. Weston, Jr., M.D., Mason City; Abdominal Pain, A. E. Jensen, M.D., Humboldt; Case Report: Puerpera, C. W. Thomas, M.D., Forest City; Report of the Committee on the Costs of Medical Care, W. W. Bowen, M.D., Fort Dodge.

Each presentation was highly interesting, well presented and widely discussed. The popularity of these district meetings grow with each meeting and this district is to have their fourth meeting at Hampton in March.

RADIO TALKS

WOI—Friday, 4:00 p. m.
WSUI—Thursday, 8:00 p. m.

February 3—Insanity and the Public—F. A. Ely, M.D.
February 10—Diphtheria—George H. Keeney, M.D.
February 17—Recreation in Winter — Director of Physical Education, Iowa State College.
February 24—Keeping After Smallpox—H. L. Sayler, M.D.
March 3—Scarlet Fever and Measles — R. H. McBride, M.D.

NEW RADIO SERIES

On January 8, E. R. Squibb and Sons began a series of half hour radio programs every Sunday at 4:30 P. M., New York time, over the Red Network of the National Broadcasting Company chain. The feature of this period is the dramatization of gripping moments from the history of medicine. The announcements emphasize the fact that only through a sufficient number of properly trained physicians can a community expect to meet its responsibility for the care and prevention of illness and the protection of health. Impressive reasons are also mentioned as to why the use of the family doctor is the best way to lower the costs of competent, sympathetic and understanding general medical care.

THE OPEN FORUM

Viewpoints and opinions expressed in this section are those of the individual contributor and not necessarily those of the Journal

Bureaucracy and Medicine

Ours is a time not of law but of laws. Under no autocracy was a nation ever hampered by so many useless, unenforceable, ill-considered laws as is our own land of the free. In addition to the laws for the ordinary citizen, we doctors have a special set of laws, such as no Russian tyranny ever imagined, to hedge around the activities of an honorable profession.

The use of alcohol which many conscientious physicians, such as Osler, have thought to be a very useful, if not an absolutely necessary medicine, and which many of us regard as a most innocuous and indispensable antiseptic, is cluttered up with such annoyances as applications for application blanks, which must be made within rigid dates; carbon copies; endless repetition of names, dates and numbers; minutely kept records; periodic reports which violate the confidences of our patients; violations of the privacy of our offices and homes without actual or constitutional warrant; hailing us into court to verify names, diseases and addresses; and writing to our patients to ask if they actually were sick and purchased the medicine prescribed.

The Harrison Law as administered is particularly onerous and humiliating. As practically administered, druggists cannot, at least in some instances they cannot, dispense morphin tablets in the original tubes which for all practical purposes, are surgically aseptic. When a protest is made to the administrative representative one is met by the statement, "Addicts who have lots of experience do not bother at all with these frills in technic; even the best doctors give hypos of tablets not taken from aseptic tubes." The answer is of course, that we do not at all care to imitate the surgical practices of addicts, nor even those of the best doctors, in a technic to which they are constrained, by a set of stupid and ignorant bureaucrats, who understand about as much of aspesis as Blind Boone did of algebra.

The piddling activities of these Harrisonites; the conscientious counting of tablets; their inquiries as to why one has two tubes of apomorphin on hand; their requests to see personally this or that cancer addict; and their undignified underground spying, remind one of nothing so much as Russia. For this harrassment we must pay an exorbitant and unjust tax.

Some years ago an irregular practitioner in New York blatted himself into page one, by his shameful disclosure of an alleged professional confidence in a notorious paternity case. His monstrous treachery was rightly condemned by the entire healing profession, including his own cult. Since the days of Hippocrates, respectable practitioners have upheld the inviolability of professional secrets. It is hard to imagine a circumstance which would justify such a dishonorable act as the betrayal of a patient's confidence. Certainly justification for such action is not to be found in a fool law passed by a lot of half-baked legislators. Yet we now have a law which requires a written report, whenever a doctor is called in to see a patient who has been shot. The other laws which I have mentioned, however autocratic in themselves, or however stupidly administered, are nothing more than annoying. The last is vicious. A respectable profession cannot possibly obey it, and jail sentences should not coerce us. Happily there is not the slightest probability that the supreme court will uphold a law which aims such an outrageous blow at the honor of our profession; at our high ideals proudly adhered to for centuries; at our standing before the judgment of our fellow men.

J. P. Dougherty, M.D.

Belle Plaine Contract Renewed

A year ago the medical profession of Belle Plaine organized and made a contract with the board of supervisors of Benton county to treat the indigent people of this vicinity for a stipulated sum to be paid monthly to the President of the Medical Association of Belle Plaine. Mention of the fact was made in the Journal at the time.

This year another contract has been made, with several changes; mainly the fact that we get five dollars extra for confinement cases and that our county supervisors agree to furnish all serums, antitoxins and vaccines.

This method has developed a feeling of satisfaction in that particular class of patients, since they can now have the physician of their choice. It has created much closer harmony and team work among the medical men. Our board of supervisors were well pleased with last year's work and were anxious to renew the contract on more liberal terms.

We will be glad to answer any questions concerning our contract from any group of medical men who care to study this procedure.

C. J. Snitkay, M.D.

SOCIETY PROCEEDINGS

Black Hawk County Annual Meeting

The annual meeting of the Black Hawk County Medical Society was held Wednesday, January 25, at which time a scientific paper on Schilling Hemogram was presented by S. W. Barnett, M.D., of Cedar Falls. Election of officers resulted as follows: Dr. Thomas F. Thornton, president; Dr. C. C. Grant, vice president; Dr. Eugene Smith, secretary; Dr. G. C. Murphy, treasurer; Dr. Thornton, delegate, and Dr. T. U. McManus, alternate delegate.

Eugene Smith, M.D., Secretary.

Boone County Annual Meeting

Thursday, December 29, members of the Boone County Medical Society held their regular annual meeting and elected Dr. William Woodburn of Boone, president; Dr. Robert S. Shane of Pilot Mound, was named vice president, and Dr. Mark C. Jones of Boone was reelected secretary and treasurer. Drs. Jones and Ben T. Whitaker, both of Boone, were elected delegate and alternate delegate, respectively.

Buena Vista County

Mark C. Wheelock, M.D., and W. D. Runyon, M.D., both of Sioux City, addressed the Buena Vista County Medical Society on Edema and Heart Disease, Friday, January 13.

Cerro Gordo County

The Cerro Gordo County Medical Society held its regular meeting at the Cerro Gordo Hotel, Tuesday, January 17. After the six-thirty dinner, William C. Egloff, M.D., read a paper on Nephrotic Edema and Its Treatment. Dr. L. R. Woodward, councilor for the second district, gave a short talk on the activities and report of the Committee on the Costs of Medical Care. Dr. Egloff was elected secretary and treasurer to fill the vacancy created by Dr. J. E. Marek's resignation from those offices.

T. E. Davidson, M.D., Secretary.

Clay County Annual Meeting

Dr. E. A. Rust of Webb was named president of the Clay County Medical Society, at the annual meeting held in Spencer, Monday, January 9. Dr. E. E. Munger, Jr., of Spencer was chosen vice president, and Dr. C. C. Collester, also of Spencer, was reelected secretary and treasurer.

Clinton County

A. W. Erskine, M.D., of Cedar Rapids, was the speaker of the evening, when the Clinton County Medical Society met Tuesday, January 17. Following the dinner, Dr. Erskine delivered his address, which was on Common Fractures of the Wrist. Peter A. Bendixen, M.D., of Davenport, was present and gave an interesting discussion in regard to some of the methods he has employed in treating these fractures from an industrial and compensatory viewpoint. Open discussion was led by H. J. Heusinkveld, M.D., of Clinton.

Ralph F. Luse, M.D., Secretary.

Crawford County

The Crawford County Medical Society met in regular session in Denison Tuesday, January 17, and after the customary seven o'clock dinner, the following scientific program was presented: Some Remarks on Cardiac Disease, A. D. Dunn., M.D., Omaha; The Treatment of Cardiac Failure, John R. Kleyla, M.D., Omaha; Electrocardiographic Tracings and Their Application in General Practice, Henry D. Jones, M.D., Schleswig.

J. James Duffy, M.D., Secretary.

Dallas-Guthrie Society

Members of the Dallas-Guthrie Medical Society met at "The Gables" in Adel, Thursday, January 19, for their regular meeting. Following the noon dinner, Dr. W. L. Thompson presented his president's address, after which Frank A. Ely, M.D., of Des Moines, gave a paper on a Neuropsychiatric Clinic.

Davis County

Harold A. Spilman, M.D., of Ottumwa, was the guest speaker of the Davis County Medical Society when members of the society met in Bloomfield, Monday, January 2. Dr. Spilman spoke on Influenza, and Hugh Fenton, M.D., of Bloomfield, presented a case report as part of the program.

Des Moines County

The county health unit was thoroughly discussed at the meeting of the Des Moines County Medical Society held in Burlington, Tuesday, January 17, when papers on that subject were presented as follows: State Board of Health Requirements for a Local Health Officer, F. C. Suggett, M.D., Health Unit Problems of the Local Board of Health, George B. Crow, M.D., and Health Units from the Standpoint of a Medical Practitioner, C. E. Kaufman, M.D.

Floyd County Meetings

The annual meeting of the Floyd County Medical Society was held Tuesday, December 27, and Dr. J. B. Miner, Sr., of Charles City was elected president, while his son, Dr. J. B. Miner, Jr., was named secretary and treasurer. The scientific program consisted of a paper on Chronic Lymphatic Leukemia, by J. M. Miner, Jr., M.D., of Charles City, and one on Sacroiliac Pain, by M. B. Call, M.D., of Greene.

Tuesday, January 24, the society met with the Cedar Valley Hospital staff in the Y. M. C. A. rooms at Charles City, at which time E. E. Lashbrook, M.D.,

of Marble Rock gave an interesting paper on The Mechanics of Anesthesia. F. H. Fillenwarth, M.D., of Charles City presented a very instructive discussion of Infection of the Petrous Portion of the Temporal Bone, citing six case reports. Both papers were followed by general discussion.

J. B. Miner, Jr., M.D., Secretary.

Fremont County Annual Meeting

The Fremont County Medical Society met in Hamburg, Friday, January 20, and elected officers to serve during 1933 as follows: Dr. L. A. Baldwin of Riverton, president; Dr. H. P. Cole of Thurman, vice president; Dr. A. E. Wanamaker of Hamburg, secretary and treasurer. G. L. Roarke, M.D., of Tabor furnished the scientific program, presenting a paper on Heredity.

Greene County Annual Meeting

At the annual meeting of the Greene County Medical Society held Thursday, January 5, the following officers were elected: Dr. B. C. Hamilton, Jr., president; Dr. J. M. Jackson, vice president; Dr. John R. Black, secretary and treasurer; Dr. George W. Franklin, delegate, and Dr. Hamilton, Jr., alternate delegate.

Ida County Annual Meeting

Officers recently elected to serve Ida County Medical Society during the year are: Dr. E. S. Heilman of Ida Grove, president; Dr. C. G. Bretthauer of Holstein, vice president; Dr. W. P. Crane of Holstein, secretary and treasurer; Dr. Crane, delegate, and Dr. Bretthauer, alternate delegate.

W. P. Crane, M.D., Secretary.

Jasper County

Tuesday, January 3, the Jasper County Medical Society held a dinner meeting and James C. Hill, M.D., of Newton, read a scientific paper on Ulcer of the Stomach, Its Complications and Treatment.

Johnson County

The Johnson County Medical Society held its regular monthly meeting at the American Legion Building in Iowa City, Wednesday, January 4. Harry P. Lee, M.D., spoke on The Effect of Pregnancy on the Urinary Tract, and Henry S. Houghton, M.D., former dean of the College of Medicine, State University of Iowa, presented a paper on Doctors and the Ample Life.

Horace M. Korns, M.D., Secretary.

Jones County Annual Meeting

Dr. C. R. Smith of Onslow was elected president of the Jones County Medical Society at a meeting held Monday, January 30, in Anamosa. Dr. H. F. Dolan of Anamosa was reelected secretary and treasurer.

Linn County

Thursday, January 12, Joseph L. Baer, M.D., associate professor of obstetrics and gynecology, University of Chicago, addressed the Linn County Medical Society on The Cervix During Labor and Postpartum. His paper was discussed by Drs. W. R. Whiteis of Iowa City, E. D. Plass of Iowa City, Emery E. Magee of Waterloo, Erwin von Graff of Iowa City and W. E. Brown of Cedar Rapids. David E. Beardsley, M.D., of Cedar Rapids, also presented a paper, taking as his subject, Fractures of Shafts of Radius and Ulna.

Two special papers are features of the February meeting, when Arthur Steindler, M.D., of Iowa City, and William R. Cubbins, M.D., assistant professor of surgery, Northwestern University, Chicago, will appear on the program.

T. F. Hersch, M.D., Secretary.

Marshall County

F. L. Wahrer, M.D., president of the Marshall County Medical Society, furnished the scientific program for that organization at a meeting held Tuesday, January 3. Dr. Wahrer spoke on A Physician's Obligations, considering the question of medical ethics first from the standpoint of the doctor's obligation to his patient; second, to his community; and third to his fellow practitioners. The meeting closed with the showing of motion pictures of forceps delivery.

Polk County

The regular meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held in Des Moines, Tuesday, January 31, at which time Oliver J. Fay, M.D., presented the address of the evening, discussing at some length the Final Report of the Committee on the Costs of Medical Care. Dr. Olin West, secretary of the American Medical Association, was present and contributed to the interesting program. A more detailed account of this meeting will be found on the Speakers Bureau Page of this issue.

Scott County

The Scott County Medical Society met Tuesday, January 3, for its regular dinner meeting. Erwin von Graff, M.D., of Iowa City, was the speaker of the evening, taking as his subject, Ovarian Cysts and Pregnancy.

Tama County Annual Meeting

Officers elected to serve Tama County Medical Society for 1933 are: Dr. F. T. Launder, of Garwin, president; Dr. K. E. Fee of Toledo, vice president; Dr. G. T. McDowall of Gladbrook, secretary and treasurer.

Van Buren County Annual Meeting

Thursday, January 5, the members of the Van Buren County Medical Society met for a dinner and business session, and elected the following officers for 1933: Dr. L. A. Coffin of Farmington, president; Dr. H. E. Woods of Birmingham, vice president; Dr. C. N. Stephenson of Milton, secretary and treasurer; Dr. J. W. Webb of Bonaparte, delegate, and Dr. E. E. Sherman of Keosauqua, alternate delegate.

Wapello County Meetings

The Wapello County Medical Society met for its first bimonthly meeting of the year, Tuesday, January 3, and Clyde A. Henry, M.D., of Farson, gave an exceedingly interesting and valuable paper on The Obstetrical Experiences of a Country Practitioner. The paper was entertaining and instructive, being a decided departure from the usual stereotyped essay, in that it abounded in subtle wit and humor, as well as very wisely chosen facts and conclusions.

The second meeting of the month was held Tuesday, January 17. E. B. Howell, M.D., of Ottumwa, presented a paper on Business Methods in Medicine. The subject was well presented and freely discussed.

Evon Walker, M.D., Secretary.

Worth County

Officers elected at the meeting of the Worth County Medical Society held Wednesday, January 11, are as follows: Dr. G. S. Westly of Manly, president; Dr. C. A. Hurd of Northwood, secretary and treasurer; Dr. Westly, delegate, and Dr. R. L. Olson of Northwood, alternate delegate.

Fort Madison Medical Society

The monthly meeting of the Fort Madison Medical Society was held Wednesday, January 18, and an interesting program presented. F. W. Noble, M.D., read a paper on Acute Infantile Paralysis, which embodied the last published facts on the diagnosis and treatment of infantile paralysis, with special reference to the treatment by convalescent serum.

Iowa and Illinois Central District Medical Association

R. W. McNealy, M. D., Northwestern University, Chicago, addressed members of the Iowa and Illinois Central District Medical Association, Thursday, January 12, at a meeting held in Davenport. His subject was The Evaluation of the Surgical Risk.

Sioux Valley Eye and Ear Academy

The annual meeting of the Sioux Valley Eye and Ear Academy was held in Sioux City, Tuesday, January 24, and the following officers elected for 1933: Dr. C. L. Chambers of Des Moines, president; Dr. J. J. Hompes of Lincoln, Nebraska, vice president, and Dr. F. H. Roost of Sioux City, secretary and treasurer. The scientific program presented before the academy included: Personal Experiences on Cataract Work in India, Eugene C. Foote, M.D., Hastings, Nebraska; Care of Glaucoma, Abbott M. Dean, M.D., Council Bluffs, Iowa; Unreal Phenomena and Their Relations to Auditory Tests, A. G. Pohlman, M.D., dean of the College of Medicine, University of South Dakota; Thrombophlebitis of the Lateral Sinus, C. E. Robbins, M.D., Pierre, South Dakota; Notes on Oriental and Spanish Eye Clinics (illustrated), J. J. Hompes, M.D., Lincoln, Nebraska.

Postgraduate Medical Association of Southwestern Iowa

Monday, January 30, members of the Postgraduate Medical Association of Southwestern Iowa met in Shenandoah and two Kansas City physicians read scientific papers as follows: Graphic Study of Heart Sounds, Graham Asher, M.D., and The Dawn of a Specialty in Medicine—Allergy and Physical Allergy, W. W. Duke, M.D.

Waterloo Medical Society

Tuesday, January 17, Ernest Kelley, M.D., of Creighton University, Omaha, addressed the Waterloo Medical Society on Multiple Sclerosis and Cerebellar Abscess, illustrating his talk with motion pictures.

AUXILIARY NEWS

Dallas-Guthrie Auxiliary

The Woman's Auxiliary to the Dallas-Guthrie Medical Society met Thursday, January 26, at Adel. The members were urged to conduct a campaign for securing subscriptions to Hygeia, and a committee was appointed to prepare resolutions on the death of one of the members, Mrs. George P. Elvidge of Perry.

Thora M. Brookings, Publicity Chairman.

Webster County

The wives of twenty Webster county physicians were present at a meeting Monday, January 23, and officially organized the Woman's Auxiliary to the Webster County Medical Society. Officers of the new organization are: Mrs. E. D. Morrison, president; Mrs. F. L. Knowles, secretary, and Mrs. E. M. Kersten, treasurer.

Woodbury County

Wednesday, January 25, the Sioux City Mesdames entertained at luncheon, with the wives and daughters of physicians attending the Sioux Valley Medical Association meetings as guests. Thirty Sioux City women served as hostesses to more than twenty guests.

INTERESTING NEWS

In Brief

Dr. N. W. Faxon, President Elect of the American Hospital Association, testified before the joint congressional committee on veterans' legislation that of the total number of cases in government hospitals last year, 54 per cent were for non-service connected disabilities and diseases.

The annual statement of the Washington county hospital for the year 1932 indicated that money received for the care of 470 patients, exclusive of the 95 babies born at the hospital, was $16,458.57, while total expenses for the year were $31,555.53.

A research fund of $1,500 has been received by the University of Nebraska from the Merrill Company of

Cincinnati for work on allergy to be administered under the supervision of the departments of internal medicine and bacteriology of the university.

A program of economy will compel the recently completed one million dollar addition to the Philadelphia General Hospital to remain idle, since sufficient funds will not be provided by the city to equip and staff the new building.

Figured on the basis of ordinary medical fees, the Muscatine county poor received medical services in the amount of $13,877.22 from the Muscatine County Medical Society, whose contract with the county pays $3,600 per year.

One hundred guests from all parts of Iowa, Minnesota and Illinois contributed to the success of the twenty-third annual birthday clinic held by Dr. W. A. Rohlf of Waverly, former president of the Iowa State Medical Society.

Including driver's expenses and depreciation on equipment the new invalid coaches operated by the University Hospital at Iowa City transports patients at an average cost of three cents per mile per patient.

The gamma rays of radium have been employed in photographing through steel, thus replacing the x-ray, which has been proved ineffective in penetrating steel to a greater depth than three inches.

To protect the discovery from exploitation the Wisconsin Alumni Research Foundation has recently patented an inorganic compound of iron and copper for use in the treatment of anemia.

At the recent meeting of the Association of American Physicians, Dr. G. Canby Robinson, director of the New York Hospital and Cornell Medical College Association, was elected president.

Ernest Sachs, professor of clinical neurologic surgery, Washington University School of Medicine, St. Louis, has been elected a member of the German Academy of Sciences at Halle.

As a memorial to his son, William H. Donner of Villanova, Pennsylvania, has given $2,000,000 for cancer research to be administered by the International Cancer Research Foundation.

Employing "one-way light," scientists at the University of California have measured the proportions of the filtrable viruses and state that these viruses have the shape of tiny rods.

To overcome the immediate loss in weight encountered in new-born babies, Dr. I. Newton Kugelmass has recently reported the feeding of a solution of dextrose, gelatin and salt.

The Muscatine county board of supervisors has contracted with the Muscatine County Medical Society for the care of the indigent of the county for $4,800 for the year 1933.

Pine Knoll Sanitarium, Scott county's tuberculosis hospital, caring for 202 patients during the past year at a cost per patient of $1.79, showed a profit of $9,702.15 for the year.

A new drug developed at the Mayo Clinic, given the name dihydromorphinone hydrochloride, is said to be five times more potent for the relief of pain than morphine.

Dr. George F. Dick has been appointed chairman of the department of medicine in the Division of Biological Sciences at the University of Chicago.

Persons suffering from electric shock annually in the United States number 2,500, with fatalities occurring in about fifty per cent of the cases.

As a result of experiments conducted at the University of Chicago a protein-poor diet is incriminated as the cause of ulcers of the stomach.

Despite economic conditions the Palo Alto Hospital, caring for 166 patients during 1932, showed a profit over operating expense.

It has been reported that the University of Rochester will receive about twenty million dollars from the George Eastman estate.

The number of cases of communicable diseases in Sioux City has dropped from 2,649 in 1930 to 2,078 in 1931, and 992 in 1932.

More than 11,000 patients made 15,500 visits to the Des Moines Health Center clinics during 1932.

PERSONAL MENTION

Dr. John F. Herrick of Ottumwa, past president of the Iowa State Medical Society, who has been in the St. Joseph Hospital at Ottumwa for some time, is reported as being improved.

Dr. William A. Boice has arrived in Cedar Falls and is taking care of the practice of the late Dr. William L. Hearst. Dr. Boice is a recent graduate of the College of Medicine, University of Iowa, and for the past year has been engaged in surgical work at the Augustana Hospital in Chicago.

Dr. Julian D. Boyd of the State University at Iowa City, has been invited to present a paper before the St. Louis Pediatric Society. His address will be on "The Relation of Diet to Dental and General Health."

Dr. William W. Johnston has been appointed deputy state health commissioner to fill the vacancy created by the resignation of Dr. Donald E. Camp. Dr. Johnston comes to Iowa from Farmington, Missouri, where he was associated with the Missouri State Department of Health as a district health officer for several counties.

Dr. George Ryan of Maquoketa, addressed the Bellevue Parent-Teachers Association, Thursday, January 26, on "Child Health Insurance."

Dr. G. E. Barr of Sioux City has recently been elected president of the Abu-Bekr Shrine Chanters, following a dinner meeting of that group, Tuesday, January 10.

Dr. William Malamud, assistant director of the psychopathic hospital at the State University of Iowa, spoke before the Philo Club, Sunday, January 15. His subject was "David Leiser, a Study in Personality Types."

Dr. T. C. Denny of Des Moines assumed his new duties as president of the Des Moines Chamber of Commerce, Tuesday, January 3.

Dr. Melvin G. Bourne of Algona discussed "The Immunization of Disease," at a meeting of the Mothers and Daughters Club, Thursday, January 26.

Dr. Peter A. Bendixen of Davenport, has been made a member of the American Academy of Orthopedic Surgeons. The only other Iowan who is a member of this group, is Dr. Arthur Steindler of Iowa City, according to newspaper reports.

Dr. John T. McClintock, Dr. Howard L. Beye and Dr. E. D. Plass have been appointed by President Walter A. Jessup to take charge of administrative affairs for the College of Medicine, with Dr. McClintock acting as chairman of the committee.

Dr. Granville N. Ryan of Des Moines spoke before the Newton Junior Chamber of Commerce, Thursday, January 12, on "The Depression and How it Affects the Health of a Community."

New members of the State Board of Health include: Dr. T. D. Kas of Sutherland; Dr. J. M. Smittle of Waucoma; Dr. C. W. Ellyson of Waterloo, and Dr. J. F. Aldrich of Shenandoah. Dr. C. A. Boice of Washington, who is also on the board, was the only member of the old board to be reappointed.

MARRIAGES

Saturday, December 24, Miss Constance Vivian Hull, of Berwyn, Illinois, was married to Dr. Clinton E. Mershon, of Adel, the ceremony taking place at the home of the bride's sister in Rosendale, Wisconsin.

DEATH NOTICES

Coleman, Raymond Clare, of Estherville, aged forty-three, died January 7 as the result of self-inflicted gunshot wounds. He was graduated in 1912 from the College of Medicine, University of Iowa, and at the time of his death was a member of the Emmet County Medical Society.

Hennessy, Albert Vincent, of Council Bluffs, aged forty-eight, died January 15. He was graduated in 1906 from the College of Medicine, University of Iowa, and at the time of his death was a member of the Pottawattamie County Medical Society. A more complete obituary will be found in the History of Medicine Section of this issue.

Sloan, Milton Granville, of Mitchellville, aged eighty-four, died December 28. He was graduated in 1873 from Rush Medical School and at the time of his death was a life member of the Polk County and Iowa State Medical Societies.

AMERICAN BOARD OF DERMATOLOGY AND SYPHILOLOGY

A board for the certification of competent practitioners in dermatology and syphilology has recently been appointed.

The primary purpose of the board is to determine the competence of physicians who are engaged in the practice of these two specialties. It will prescribe certain standards of fitness, conduct examinations to determine such fitness, and issue certificates to those who successfully fulfil the necessary requirements.

A second object is to publish lists of physicians who shall have been certified by the board, for the benefit of hospitals, medical schools, other physicians and the lay public.

A third object is to improve the standards of practice of dermatology and syphilology by investigations of medical school curricula and by investigation and encouragement of adequate facilities for graduate instruction in these specialties.

A certificate granted by this board does not of itself confer any degree or legal qualifications or license to practice dermatology or syphilology. The board does not intend to limit or interfere with the professional activity of any duly licensed physician. Its aim is to elevate the standard of qualifications for specialists in this field and to certify as specialists those who voluntarily comply with the requirements of the board.

Further information may be secured by writing Dr. C. Guy Lane, Secretary of the American Board of Dermatology and Syphilology, 416 Marlboro Street, Boston, Massachusetts.

History of Medicine in Iowa

Edited by the Historical Committee

Dr. William Jepson, Sioux City
Dr. Arthur D. Woods, State Center
Dr. Frank M. Fuller, Keokuk
Dr. Walter L. Bierring, Des Moines
Dr. John T. McClintock, Iowa City

Historical Statistics Regarding the College of Medicine, State University of Iowa at Iowa City

John T. McClintock, M.D.*

The organization and early development of a college of medicine as an integral part of the State University at Iowa City was accomplished only by bringing into action the most powerful individual and political influences that could be assembled to offset a widespread and an extremely acrimonious opposition. Upon the untiring efforts and political sagacity of three men rested most of the burden in bringing about a successful outcome. The originator of the movement for a school at Iowa City in 1867-1868 was Dr. W. F. Peck, an enthusiastic, energetic surgeon located at Davenport. He was at that time but twenty-seven years of age and upon him fell the leadership of the struggle. Associated closely with Dr. Peck was Judge J. F. Dillon of Davenport and Hon. John P. Irish of Iowa City. The pleas of these three convinced the Board of Trustees that a medical school at Iowa City was needed. These three outstanding men conducted maneuvers in the Thirteenth General Assembly which defeated a bill designated to prevent the opening of the school of the members of a hostile Board of Regents, newly appointed in 1870, in order to secure a majority of one vote in favor of opening the new medical school in September of that same year.

Judge John F. Dillon, M.D., was graduated in 1850 from the College of Physicians and Surgeons of the Upper Mississippi Valley which was located first at Rock Island, then at Davenport and finally becoming the College of Physicians and Surgeons of Keokuk. Dr. Dillon, after a few months in practice at Farmington, found the life of a rural physician too strenuous for one who could not ride horseback and so gave up his medical career and entered the legal profession. In 1870 he was a member of the Supreme Court of Iowa and a few years later was appointed to the Federal Court. While recovering from an attack of typhoid fever under Dr. Peck's care, Judge



As it was in 1870.

Dillon promised his support to the project of a medical school at Iowa City and he never wavered in his help or failed to use his great influence for his friend's undertaking. The third man of the group, the Hon. John P. Irish, was a Democrat, a politician, editor of the Iowa City *Press* and a member of the Board of Trustees when the first official action establishing the school was taken. The editorials of Mr. Irish were famous for the frankness with which he presented his ideas, the bitterness and ferocity of his attack when the question or person did not meet with his approval and the equally vigorous praise and appeal with which he presented those matters which had his support.

The official records establishing the school are

*Junior Dean and Professor of Physiology, College of Medicine, State University of Iowa.

brief and simple and give no indications of the storms that were to follow and which rumbled over the state for years to come. On September 17, 1868, the Board of Trustees* requested Dr. Peck to meet with them to discuss the establishment of a medical school. On the following day a committee consisting of President Black and Messrs. Ross and Burnett reported the following resolution which was adopted unanimously: "That there be and is hereby established a medical department in the University with the following chairs: Surgery, Anatomy, Materia Medica, Obstetrics, Physiology and Microscopic Anatomy, Principles and Practice of Medicine and Chemistry." Under additional resolutions all fees and tuitions were to be used for the benefit of the new department but the professors were to "serve without pay until such time as the Board or Legislature should provide for the same." Beyond the above action and such other measures as were necessary for the control of the new department, nothing further seems to have been done until June, 1869. At this time $3,000 was set aside for the remodeling of the south half of Old South Hall. This building had been built in 1863 as a dormitory and dining hall but at this time (June, 1869) the part to be remodeled was occupied by Professor T. S. Parvin, department of Natural History, as his place of residence. The remodeling of South Hall during 1869-1870 provided the department with such rooms as were considered necessary for a medical school of that day, including a large amphitheatre seating over one hundred persons, where all lectures, medical and surgical clinics, including operative work, could be held; a waiting room for patients; a dissecting room; one for physiology and microscopic anatomy; and finally one in which the usual materia medica cabinet could be set up. There was no hospital of any kind. Today such a meager provision of space for a medical school would be ridiculous but at that time it was conceded to be in keeping and equal to that of the best medical schools of the midwest.



South Hall
First home of medical department.

While the material preparations for the housing of the medical department were being carried on at Iowa City, there grew up over the state, under the leadership of Dr. J. C. Hughes, Dean of the College of Physicians and Surgeons at Keokuk, a strong opposition to the efforts of Dr. Peck and his associates. The lack of any need for an additional medical school in the state, and the unwarranted expenditure of state money for professional training, particularly for a selected type of medical practice, were the general reasons advanced by the opposition, but back of it all was the fear of the faculty and of the alumni of the Keokuk school that there would be a loss not only of students but also of prestige because it would be necessary to drop the title "Department of the State University" which the Keokuk school had been privileged to use for twenty years.

The difficulties reached a climax in the winter of 1869-1870 when the Iowa State Medical Society adopted a strong series of resolutions opposing the opening of the school at Iowa City and condemning the members of the medical profession who were responsible for its organization. The resolutions were transmitted to the General Assembly then in session at Des Moines. A series of bills both for and against the university were introduced, all of which failed to pass both houses. However, before the end of the session a compromise was obtained and as a result the management of the university was reorganized; the old Board of Trustees was removed; and a Board of Regents with an almost completely new personnel was established. When the question of approval of the medical department at Iowa City came before the new board a majority of one vote was recorded in the affirmative. With this final approval there remained only the appointment of a few additional members of the faculty to complete the preparations for the opening of the new department.

On September 20, 1870, the preliminary course was opened and two weeks later the regular lectures began with thirty-seven students enrolled, ten of whom were women. The complete roster

*The Board of Trustees at the time consisted of the following members: Gov. Samuel Merrill, James Black, D.D., president of the University, Hon. R. M. Burnett of Muscatine, Hon. H. C. Bulis, M.D., Decorah, Hon. C. W. Slagle of Fairfield, Hon. C. W. Hobart, Iowa City, J. P. Irish of Iowa City and Hon. L. W. Ross of Council Bluffs.

of the faculty with their places of residence was as follows:

Dr. W. F. Peck, Surgery, Davenport; Dr. W. S. Robertson, Principles and Practice of Medicine, Muscatine; Dr. P. J. Farnsworth, Materia Medica, Clinton; Dr. J. F. Kennedy, Obstetrics, Tipton; Dr. W. D. Middleton, Physiology and Microscopic Anatomy, Davenport; Judge John F. Dillon, Medical Jurisprudence, Davenport;



First medical faculty.
Upper row, left to right: Hinrichs, Shrader, Robertson, Middleton, Clapp.
Lower row, left to right: Farnsworth, Peck, Dillon.

Dr. J. C. Shrader, Diseases of Women and Children, Iowa City; Dr. J. H. Boucher, Anatomy, Iowa City; Dr. Gustavus Hinrichs, Chemistry, Iowa City; Dr. E. H. Hazen, Lecturer on Eye and Ear, Davenport; Dr. Mark Ranney, Lecturer on Insanity, Mt. Pleasant; Dr. P. T. Smith, Lecturer on Dentistry, Iowa City; John North, Demonstrator of Anatomy, Iowa City; R. W. Pryce, Prosector to Surgery and Curator of the Museum, Iowa City.

Of this group Dr. Kennedy was the only one who failed to take his place and the chair of obstetrics was combined with that of Diseases of Women and Children, Dr. Shrader taking charge of both departments. At an early meeting of the faculty, Dr. Peck was elected dean in recognition of his efforts for the establishment of the school.

The initial political and professional opposition to the establishment of the medical school having been overcome, its growth and permanency depended upon the character of the men selected to guide it through the first few years. The men selected for the major positions of the faculty seemed to have been well chosen and well fitted for the work which was to be accomplished. Three were residents of Iowa City, the others were non-residents and for several years had to contribute not only their time but also found it necessary to personally pay their own traveling expenses between their places of residence and Iowa City. The efficient, faithful and conscientious service of these first faculty men laid the foundation for such subsequent distinction as has come to the school and it was by their vigilant care and devotion that the institution became an integral part of educational work of the state. At the very beginning the principle was set out that the school's first responsibility was the adequate training of its students for the practice of general medicine and to furnish such other service to the state as its peculiar facilities might offer, a policy that has consistently guided the school during its sixty years of active work.

The leader of the faculty and the dominant character in all its activities was Wm. F. Peck, a native of New York state. Economic necessity forced him to give up his schooling at an early age and to take a job as newsboy on a New York railroad. After a few years he saved sufficient funds to permit him to enter Bellevue Hospital and Medical College. Four years later he obtained his medical degree, having for two years concurrently with his medical course served as "resident" in Bellevue Hospital and Blackwells Island Hospital. Upon graduation he joined the Federal Army and was assigned to the Lincoln Memorial Hospital, Washington, D. C. After a service of eighteen months he resigned and immediately came west, locating in Davenport, where he resided until his death in 1891.

In addition to his work for the medical school, Dr. Peck organized Mercy Hospital at Davenport. As surgeon-in-chief of the Rock Island railroad he organized the medical and surgical department so successfully that it was considered a model for other railroads and was highly commended for its efficient service. As a member of many societies, state and national, he took a prominent place in the affairs of each.

As a surgeon he was nationally recognized for his skill and daring. He entered fields of operation not commonly undertaken by most surgeons of his day. He was among the first to recommend an early operation in cases of appendicitis and his abdominal and pelvic surgery gave him national prominence. His early training had been received before asepsis and antisepsis was universally recognized and he never fully accepted the teachings of Lister. Following the ideas of William Tait he insisted that simple cleanliness combined with rapidity and dexterity were the essential factors in successful surgical operations.

Dr. Peck had a strong magnetic personality, energetic, ambitious, self-reliant; in positions of

authority he was the "master" and when opposition was present he was the more determinate. He was elected president of the Iowa State Medical Society which a few years before under the leadership of Dr. J. C. Hughes of Keokuk had passed a series of resolutions strongly condemning him for his efforts in organizing the Iowa City school. When called upon to deliver his presidential address, Dr. Peck had some difficulty in reaching the rostrum because of a large plaster model which Dr. Hughes had on exhibit. Dr. Hughes, seeing the difficulty, arose and said, "Dr. Peck, pardon me, but if this model of mine is troubling you I shall have it removed at once." With that readiness and skill with which he met any emergency Dr. Peck replied, "Not at all, Dr. Hughes, nothing of yours is ever in my way." Thus it was through his twenty-one years of a rather stormy deanship he pushed opposition and trouble to one side and forged ahead. A great deal of credit for the success of the medical school in these early years was due to his vigilant care, his untiring energy, and his ability as a surgeon as well as a director.

Dr. James H. Boucher, the first Professor of Anatomy and Assistant Surgeon, was the oldest member of the first faculty. He was graduated from Jefferson Medical College in 1856, having previously secured an M.A. degree from Allegheny College and having been on the teaching staff of the Polytechnic College of Philadelphia for about two years. He first located in Iowa City in 1856 but becoming homesick for the east he returned to New Jersey after six months' stay in the west. A few years later he returned to Iowa City and built up an extensive medical and surgical practice. In 1861 he was commissioned assistant surgeon in the Thirteenth Regular Iowa Volunteers. He was later appointed brigade surgeon and at the close of the war was Medical Director of Georgia. He soon resigned and returned to his home in Iowa City.

As a member of the medical faculty, Dr. Boucher was a disturbing factor. He was a good and enthusiastic teacher of anatomy, but he was not, as assistant surgeon, in harmony with his chief. Dr. Boucher considered chloroform as the more desirable anesthetic while Dr. Peck favored ether. Dr. Peck did not consider disinfection and antisepsis necessary. On the other hand, Dr. Boucher was a firm follower of Lister. The story is told that on several occasions while the chief surgeon's attention was turned away from his patient, Dr. Boucher would swab out the wound with a solution of carbolic acid which he carried in a bottle in his pocket. It can be readily understood why, when difficulty over anatomic material arose about the middle of the year, Dean Peck made no special effort to protect his Professor of Anatomy against the demands of the public for his dismissal. Under public pressure Dr. Boucher resigned in January and his place was immediately filled by the appointment of Dr. E. F. Clapp, a physician then residing at Washington, Iowa.

(To be continued next month.)

OBITUARIES

EDWIN BURD, M.D.
1846-1932

RESOLUTIONS

Whereas, by death we have lost a noble pioneer physician, and friend, Dr. Edwin Burd, we bow in silence to an all-wise providence in calling him to the life beyond, after sixty-one years of service to his fellowmen, in this county. It may be truly said that Dr. Burd was a typical pioneer family physician. His years of service bear volumes of testimony from his patients and friends, as to his loyalty and sacrifice in service among them. He had a happy disposition that radiated cheer and comfort to all with whom he came in contact.

Therefore, be it resolved that the Linn County Medical Society has lost one of its charter members and loyal supporters; his family a kind and gracious father; the community a real friend and counsellor who always responded to every noble activity that needed cooperation and encouragement.

Be it further resolved, that a copy of these resolutions be sent to the family; that these resolutions be spread upon the records of the society, and a copy be sent to the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

Respectfully submitted,
J. R. GARDNER,
B. L. SHELDON,
F. G. MURRAY,
Committee.

ALBERT VINCENT HENNESSY, M.D.
1884-1933

Albert Vincent Hennessy was born in Iowa City, October 15, 1884, the son of Richard and Ellen Hennessy. He was a graduate of the Iowa City High School in 1902, and received his medical degree from the College of Medicine, State University of Iowa in 1906. This was followed by an interneship at Mercy Hospital, Council Bluffs, where he located for practice. In 1909 he was married to Marie Cornelius of Council Bluffs, and to this union were born three children: Cornelius, who died in 1913; Albert Vincent, Jr., thirteen years old, and Charles Richard, seven years old, who with their mother, survive Dr. Hennessy. In 1913 he was joined by his brother, Dr. M. C. Hennessy, in practice and this association continued until the death of Dr. A. V. Hennessy.

Dr. Hennessy was given a commission as captain

at the outbreak of the war in 1917 and stationed in the Hawaiian Department at Schofield Barracks. In a few months he was promoted to the rank of major and transferred to the department hospital at Honolulu as chief of the surgical staff. While here he was also assigned duties as surgeon member of the medical advisory board of the Hawaiian draft, which necessitated traveling to all the islands of the Hawaiian government to conduct examinations of the draftees. He was given an honorable discharge from the service in January, 1919, at which time he resumed his practice in Council Bluffs.

For many years he was active in civic affairs of this city. He was the first president of the Council



Bluffs Kiwanis Club and served as a member of the board of directors of the Chamber of Commerce for a number of years. He was also a member of the hotel committee that sponsored the building of the Hotel Chieftain. He was active in business affairs, being vice president and member of the board of directors of the Auto Finance Company, president of the McGee Investment Company, member of the board of directors of the Broadway Theater and Bennett Buildings. He also served as director of the First National Bank and of the Home Savings and Loan Association.

Dr. Hennessy was always very active in medical circles; was a past president of the Council Bluffs City and Pottawattamie County Medical Societies, second vice president of the Iowa State Medical Society in 1928, a member of the American Medical Association, the Missouri Valley Medical Society, and the Iowa Clinical Surgical Society. In college he was affiliated with the Phi Beta Pi medical fraternity. Since 1920 he had been a member of the Mercy Hospital staff and chairman of its executive committee. At one time Dr. Hennessy was the councilor of the eleventh district of the Iowa State Medical Society. Together with Dr. A. W. Erskine of Cedar Rapids and the late Dr. B. L. Eiker of Leon, he was a member of the Committee on Medical Education and Hospitals, which conducted an extensive survey of the medical situation in Iowa. This committee functioned over a period of two years, and Dr. Hennessy gave unstintingly of his time and ideas in the preparation of its report.

On February 26, 1932, he was taken suddenly ill with a coronary thrombosis, while in his office. He was confined to his bed for a period of six weeks, after which he went to California where he remained for several months before going to Chicago, from there going to New York a few days previous to his death.

J. P. Cogley, M.D.

Edward William Meis, M.D.

1877-1932

Whereas, it has pleased Almighty God, to remove from this earth, Dr. E. W. Meis, a member of the medical profession and of St. Joseph's Hospital Staff; and

Whereas, through his humanity and skill, he assuaged the pain of the sick and gave solace to the distressed, a physician whose service was ever at the command of his colleagues, the staff of St. Joseph's Hospital, Sioux City, feels deeply the great loss incurred by his death; and

Whereas the staff of St. Joseph's Hospital, recognizes the fact that the medical profession has lost one of its skillful and able members, in whom was combined the sympathetic and intellectual qualities that make for the perfect physician;

Therefore, be it resolved, that the St. Joseph's Hospital Staff of Sioux City, Iowa, extend to his bereaved family and relatives its deepest sympathy in their grief.

Be it resolved, that a copy of these resolutions be spread upon the minutes of this Staff and published in the Iowa Medical Journal, and a copy thereof be sent to his bereaved family.

Dated at Sioux City, Iowa, this 12th day of January, 1933.

Lawrence E. Pierson,
P. B. McLaughlin,
R. N. Larimer.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

A COMMUNITY MEDICAL SERVICE ORGANIZED UNDER INDUSTRIAL AUSPICES IN ROANOKE RAPIDS, NORTH CAROLINA—(Pamphlet. Publication of the Committee on the Costs of Medical Care: No. 20)—By I. S. Falk, Ph.D., Don M. Griswold, M.D., Dr. P. H. and Hazel I. Spicer. With Reports on Certain Phases of the Organization—By David Riesman, M.D., Sc.D., and George P. Muller, M.D. The University of Chicago Press, Chicago, 1932.—Price, ninety cents.

ALCOHOL AND MAN—The Effects of Alcohol on Man in Health and Disease.—Editor, Haven Emerson, M.D.; Associate Editors—Henry A. Christian, M.D.; Reid Hunt, M.D.; Arthur Hunter, LL.D., F.A.C.S.; Charles C. Lieb, M.D.; Walter R. Miles, Ph.D.; Ernest G. Stillman, M.D.—451 pages.—The Macmillan Company, New York, 1932.—Price, $3.50.

ANATOMY OF THE BRAIN AND SPINAL CORD—By William W. Looney, M.D., Professor of Anatomy, Baylor University College of Medicine, Dallas.—370 pages, illustrated.—F. A. Davis Company, Philadelphia, 1932.—Price, $4.50.

ANNUAL REPORT of the Surgeon General of the Public Health Service of the United States for the fiscal year, 1932. United States Government Printing Office, Washington, 1932. For sale by the Superintendent of Documents, Washington, D.C. —Price, $1.00, cloth.

CHILDREN'S TONSILS IN OR OUT—A Critical Study of the End Results of Tonsillectomy.—By Albert D. Kaiser, M.D., Associate Professor of Pediatrics, University of Rochester Medical School.—307 pages, illustrated.—J. B. Lippincott Company, 1932.—Price, $5.00.

FUNCTIONAL DISORDERS OF THE LARGE INTESTINE AND THEIR TREATMENT—By Jacob Buckstein, M.D., Instructor in Gastro-intestinal Roentgenology, Cornell University Medical College.—Harper & Brothers, New York and London, 1932.—(Harpers Medical Monographs)—Price, $3.00.

MAN AS PSYCHOLOGY SEES HIM—By Edward S. Robinson, Professor of Psychology, Yale University.—The Macmillan Company, New York, 1932.—Price, $2.50.

MEDICAL CLINICS OF NORTH AMERICA—(University of California Number—November, 1932)—(Issued serially, one number every other month).—Vol. xvi, No. 3.—195 pages with 31 illustrations.—Per clinic year, July 1932 to May 1933, paper $12.00; cloth, $16.00 net.—W. B. Saunders Company, Philadelphia and London, 1932.

POLIOMYELITIS—(A Survey Made Possible by a Grant from the International Committee for the Study of Infantile Paralysis.—Organized by Jeremiah Milbank.—526 pages, illustrated.—The Williams & Wilkins Company, Baltimore, 1932. —Price, $6.00.

RADIOLOGIC MAXIMS—By Harold Swanberg, B.S., M.D., F.A.C.P.—Editor of The Radiological Review.—With a foreword by Henry Schmitz, A.M., M.D., LL.D., F.A.C.S., Professor of Gynecology and Head of the Department, Loyola University School of Medicine.—Radiological Review Publishing Company, Quincy, Illinois, 1932.—Price, $1.50.

THE 1932 YEAR BOOK OF RADIOLOGY—Diagnosis.—Edited by Charles A. Waters, M.D., Associate in Roentgenology, Johns Hopkins University. Therapeutics—Edited by Ira I. Kaplan, B.Sc., M.D., Director, Division of Cancer, Department of Hospitals, City of New York.—750 pages, illustrated. —The Year Book Publishers, Inc., Chicago, 1932.—Price, $6.00.

BOOK REVIEWS

CLINICAL GYNECOLOGY

By C. Jeff Miller, M.D., Professor of Gynecology, Tulane University School of Medicine. 560 pages, illustrated. The C. V. Mosby Company, St. Louis, 1932. Price, $10.00.

This excellent work by a well known author covers in a pleasingly concise manner both the medical and sugical gynecology. Since it is a treatise on general gynecology it does not take up in an exhaustive way either the medical or surgical aspects; however, for the man in general work it should prove an excellent text on the subject. The book is well indexed and is quite unique in the great number of beautiful and original illustrations. F. W. R.

THE COLON, RECTUM AND ANUS

By Fred W. Rankin, B.A., M.A., M.D., F.A.C.S., Division of Surgery, The Mayo Clinic, Associate Professor Surgery, The Mayo Foundation; J. Arnold Bargen, B.S., M.D., M.S., in Medicine, F.A.C.P., Division of Medicine, The Mayo Clinic, Assistant Professor of Medicine, The Mayo Foundation; and Louis A. Buie, B.A., M.D., F.A.C.S., Section on Proctology, The Mayo Clinic, Associate Professor of Proctology, The Mayo Foundation. With 435 illustrations. Philadelphia and London: W. B. Saunders Company. 1932. Price, $9.50.

During the past decade, medical interest has been aroused in the examination of the rectum and anus because of the accumulated data indicating the importance of diseases of this region. Although current literature contains much on this subject, this material has not been collected into book form with any degree of completeness until the work of the present authors.

This volume presents an authoritative and comprehensive treatise on the diseases of the lower bowel with particular reference to diagnosis and surgical treatment. The latest approved methods of examination are clearly discussed, including the use of the sigmoidoscope and anoscope. Since two-thirds of the major lesions of the lower bowel are malignant ones, much space has been devoted to neoplastic diseases. Because of the wide experience of the authors and the accurate follow-up system employed at the Mayo Clinic, the discussion of prognosis presented in the volume has not been approached by other writers.

To the general surgeon, the orificial surgeon, and the proctologist, the volume will be indispensable. To physicians generally the volume is recommended as being the most outstanding and authoritative reference work on diseases of the lower bowel which has come to our attention.

DIAGNOSIS AND TREATMENT OF DISEASES OF THE THYROID GLAND

By George Crile and Associates. 508 pages with 164 illustrations. W. B. Saunders Company, Philadelphia and London, 1932. Price, $6.50.

This volume has been prepared by the staff of the Cleveland Clinic under the editorship of Dr. George Crile. It is offered, not as a formal treatise on the subject of the thyroid gland, but rather as an account of the experiences of the staff of the Cleveland Clinic in the treatment of diseases of that organ. Simple goiter, hyperthyroidism, and malignant tumors of the thyroid gland are discussed in appropriate chapters. The routine technic of operative procedure employed in the clinic is reviewed, as well as those complications which may arise following this procedure. The chapter on hyperthyroidism in children is especially valuable, since this condition is frequently unrecognized by the general practitioner.

The chapter dealing with Preoperative Management of Patients with Hyperthyroidism will prove valuable to both the surgeon and the general practitioner, but more especially to the latter because management must be maintained long after the patient leaves the hands of the operating surgeon.

The final chapter of the volume dealing with the End Results of Operations for Hyperthyroidism by Dr. George Crile, offers a most sound background for promises to be offered them in proposing surgical determining the advice to be given patients and the management of the disease. The volume is well illustrated in both colors and black and white figures.

DISEASES OF THE BLOOD

By A. Piney, M.D., M.R.C.S. Second Edition. 310 pages, 65 illustrations. P. Blakiston's Son & Co., Inc., Philadelphia, 1932. Price, $4.00.

This volume, while listed as a second edition, is essentially a new treatise on this subject, since the entire text has been rewritten and all of the newer advances in hematology have been included. In the opening chapters of the text, the author discusses the normal blood elements and blood-forming organs. In subsequent chapters, he discusses anemia and those conditions which affect the physiology or chemistry of the blood. In the closing chapters of the book, he presents the hematologic technic essential to a complete study of the blood. While not encyclopedic in nature, the volume presents in a thorough fashion those hematologic observations upon which our modern concept of blood diseases is based.

The author has drawn from his larger text for illustrations, selecting cuts which are of outstanding quality. A useful bibliography is appended for the advance student. Because of the scope of this volume, its appearance will be welcomed by every physician, regardless of the limitations of his practice, since diseases of the blood are encountered in every field of medical work.

THE DOCTOR-IN-LAW

A Resumé of Suggestions and Conclusions Arising during Medical and Surgical Examination. By Edward Adams, M.D. The International Journal of Surgery Co., Inc., New York, 1932. Price, $1.00.

Although physicians are frequently required to appear as witnesses in court procedures, in many instances they are ill prepared for their task because of an unfamiliarity with court procedures. With this thought in mind, Dr. Adams has prepared this concise treatise which offers, in 299 brief paragraphs, the most common requirements for medical testimony. The physician accustomed to medico-legal testimony will find little of interest in the volume. On the other hand the novice, will find in this volume, answers to many of the questions which arise in his mind regarding court procedure. It is obviously written for the busy physician, since its entire text covers less than one hundred pages.

ERDMANN'S CLINICS

Excerpts Selected from the Clinics of John F. Erdmann, M.D., F.A.C.S., Professor of Surgery, Columbia University. Edited by J. William Hinton, M.D., F.A.C.S., Associate Professor of Surgery, New York Postgraduate Medical School. 315 pages with 39 illustrations. W. B. Saunders Company, Philadelphia and London, 1932. Price, $4.50.

This monograph comprises a series of lectures given by John F. Erdmann to the students in the surgical seminar at the New York Postgraduate Medical School. They will be of practical value to any one doing general surgery, and they represent the author's individual views gained by vast surgical experience. Aside from preoperative and postoperative care, the author has given a terse review of 150 various surgical conditions, mostly of the abdomen. The volume is on good paper, readable print, and logically illustrated. It is not intended as a surgical text.

D. M. B.

THE FAILING HEART OF MIDDLE LIFE

The Myocardosis Syndrome, Coronary Thrombosis, and Angina Pectoris. With a section upon the Medico-Legal Aspects of Sudden Death from Heart Disease. By Albert S. Hyman, M.D., F.A.C.P., Cardiologist, Beth David and Manhattan General Hospitals, New York; and Aaron E. Parsonnet, M.D., F.A.C.P., Attending Physician and Cardiologist, Newark Beth Israel Hospital; with a Preface by David Riesman, M.D., F.A.C.P., Professor of Clinical Medicine, University of Pennsylvania School of Medicine. 538 pages, 166 illustrations. F. A. Davis Company, Philadelphia, 1932. Price, $5.00.

Another book on the heart. The number of treatises on diseases of the heart which has been published since the monumental work of Sir James Mackenzie is amazing; and the end is not yet. The present volume is very good from a mechanical point of view. It is clearly written and profusely (almost too profusely) illustrated. The title is somewhat misleading and could better have been "Disturbances

in Coronary Circulation," since the volume deals almost exclusively with coronary diseases and angina pectoris.

There is little that is new in this volume. The term, myocardosis, is used instead of the old morphologically erroneous myocarditis, and an attempt has been made to set this out as a clinical entity, but very little has been gained by so doing. The discussion on coronary disease and angina pectoris is very exhaustive and has been handled unusually well. The impression that the same facts could have been brought out more clearly perhaps by the use of fewer words, becomes more and more firmly established as one pursues this volume to the end.

The last two chapters are devoted to a medico-legal aspect of heart disease. The reviewer questions the advisability of including these, since they are practically nothing but case reports. A rather extensive and very good bibliography concludes the book.

D. J. G.

FUNCTIONAL DISORDERS OF THE GASTRO-INTESTINAL TRACT

By William Gerry Morgan, M.D., Professor of Gastro-enterology, Georgetown University Medical School. (Everyday Practice Series. Edited by Harlow Brooks, M.D.) 259 pages, 32 illustrations. J. B. Lippincott Company, Philadelphia and London, 1931. Price, $5.00.

Appreciating the frequency with which functional disorders of the gastro-intestinal tract are met in general practice, Dr. Morgan has prepared this book discussing these common ailments from the standpoint of non-surgical management. The text is divided into four general parts. The first part considers the physiology of the gastro-intestinal tract and the methods required for general and special examinations. Part two deals with those functional disorders which manifest themselves in symptoms referable to the stomach, discussing particularly the motor, secretory and sensory neuroses. Part three presents the motor and secretory neuroses of the intestinal tract. Part four deals with miscellaneous symptoms and conditions such as constipation, flatulence, visceroptosis, etc.

The various conditions are discussed from the standpoint of etiology, symptomatology, diagnosis and treatment. Numerous case histories are cited, illustrating the various conditions mentioned, detailing the course of treatment prescribed and the results obtained.

This number of the Everyday Practice Series follows the general course of presentation adopted in other books of the series. Because of the elementary nature of this book it is the reviewer's opinion that it would be of great value to general practitioners who, because of the remoteness of their graduation, have not kept abreast of this subject; or to non-medical persons who require insight into this phase of medical practice.

FUNCTIONAL DISTURBANCES OF THE HEART

Edited by Harlow Brooks, M.D., Attending Physician, Fourth Medical Service, Bellevue Hospital, etc. Everyday Practice Series. 288 pages. J. B. Lippincott Company, Philadelphia and London, 1932. Price, $5.00.

This monograph on the functional disorders of the heart is one of the volumes of the Everyday Practice Series under the editorship of Dr. Harlow Brooks. It is an interesting treatise by a clinician of wide experience, endeavoring to present these conditions in such a light that they may be clearly recognized and differentiated from those diseases of the heart which are based on actual pathology.

Particular attention is devoted to emotional influences, the anxiety or pseudo-anginas, neurocirculatory asthenia, and the causes and signs of cardiac exhaustion. The significance of paroxysmal tachycardia, the heart in early hyperthyroidism, and the relation of the heart to other disease processes are clearly presented, particularly as they are encountered in office consultations. Electrocardiography, the x-ray plate, and other laboratory aids are recommended in special cases for assistance in making differential diagnosis. An unusual arrangement of some of the chapters is shown by placing the physical examination ahead of the case history. The volume will be especially valuable to the general practitioner as a reference handbook. An unique feature of this series of monographs is the attractive binding, the cover design being a reproduction of the noted "Summa Magistri," first published in Basle, Switzerland in 1499.

W. L. B.

HOSPITALS AND CHILD HEALTH

A Publication of the White House Conference—Hospitals and Dispensaries; Convalescent Care; Medical Social Service. 279 pages. The Century Company, New York and London, 1932. Price, $2.50.

It is stated that there are 6,667 hospitals in the United States and, of this number, a sufficient group provides beds to care for 81,055 children. This volume sets forth the results of a survey made of the hospital situation, children and orthopedic hospitals in particular, and presents not only the findings of the committee, but also their recommendations regarding those steps necessary to improve the service offered to this group of patients.

In considering the difference in expense between a convalescent case and a hospital case, they conclude that "Hospitals might enlarge their usefulness by employing convalescent care to a greater extent."

Regarding the function of the hospital in disseminating medical information, they conclude that the hospital is probably the best means of educating the lay public in those things which make the judgment concerning medicine and physicians more mature

and better grounded. Referring to extra-mural functions of a hospital, they state: "Measures should be taken to increase the number of adequately prepared medical social workers." This volume presents a mass of valuable and suggestive information, and should be read and digested by every physician, since the protection of child health is the responsibility of every physician and, in fact, of every citizen.

MEDICAL CLINICS OF NORTH AMERICA

Chicago Number, September, 1932—Vol. xvi, No. 2—(Issued serially, one number every other month) 272 pages—47 illustrations. Per clinic year, July, 1932, to May, 1933—paper, $12.00; cloth, $16.00—W. B. Saunders Company, Philadelphia and London, 1932.

This number of the Medical Clinics is outstanding, first, because of the very complete symposium on diseases of the heart, which comprise the first one hundred pages of the book; and, second, because of the highly practical nature of all of the clinics presented. In this symposium on diseases of the heart, the attempt has been made to present only such cases as the general practitioner will encounter in a routine office and bedside practice. The clinics cover phases of heart disease from congenital maldevelopment to the hypertension and nephritis of adult life. Outstanding among the remaining clinics offered, are the essays on arteriosclerosis, amebic dysentery, specific therapy in lobar pneumonia and acute anterior poliomyelitis.

Particularly interesting, because of the newness and apparent usefulness in the treatment of intractable peptic ulcers, is the new mucin treatment recently introduced. In spite of the fact that this treatment is now based on empiricism, clinical evidence is being rapidly accumulated to substantiate its rationality.

PHARMACOLOGY OF THE MEDICINAL AGENTS IN COMMON USE

By Stanley Coulter, Ph.D., Sc.D.—Prepared especially for students of medicine.—Published by Eli Lilly and Company, Indianapolis.

Several standard and up-to-date volumes have appeared discussing pharmacology, which because of their size are not readily available for quick reference. With this in mind Dr. Coulter has prepared this concise treatise, covering some one thousand drugs now in common use by the medical profession, presenting the subject in a book which readily fits the coat pocket or is conveniently carried in the physician's grip. The subjects are alphabetically arranged.

Under each title there is a terse statement of the constituents of the drug, its physiologic action, dosage, and brief mention of its more important therapeutic use. In the appendix will be found a brief discussion of the incompatibility of drugs, poisons and antidotes, the distinctive signs of the more common infectious diseases, tables of weights and measures, etc.

PHYSICAL THERAPEUTIC TECHNIC (Second Edition)

By Frank Butler Granger, M.D., Late Physician-in-chief, Department of Physical Therapy, Boston City Hospital.—Revised by William D. McFee, M.D., Visiting Physician, Department of Physical Therapy, Boston City Hospital—436 pages with 135 illustrations—W. B. Saunders Company, Philadelphia, and London, 1932—Price, $6.50.

The subject covers the general therapeutic technic as employed in a large physiotherapeutic laboratory, and covers galvanic currents, ionization, reaction of degeneration, induced currents, sinusoidal currents, static electricity, mechanical vibrations, high frequency currents, diathermy, and the various types of therapeutic lights. The indications and contra-indications of each group are stressed. The mechanism of each therapeutic agent is explained without elaborate details. The author duly stresses the mechanism and therapeutic advantages of massage.

One hundred sixty-one different diseases are listed in which various physical therapeutic agents may be of value in the treatment of diseases. Low back conditions, calcified subdeltoid bursitis, arthritis, lumbago and myositis, neuritis and neuralgia, hypertension, diseases of the circulation, pulmonary diseases, hemiplegia, peripheral facial paralysis, infantile paralysis, flat foot, warts and birth marks, electrosurgery of tonsils, hemorrhoids, and diseases of the nose and throat are discussed in detail.

It appears to the reviewer that the author may be somewhat overenthusiastic about some of the results achieved by physiotherapy alone, but until any physician has had a vast experience in extensive physiotherapeutic technic it is difficult to form an opinion. There is probably no laboratory in this state outside of Iowa City having such a vast amount of equipment. It was the reviewer's experience during the World War, that general physiotherapy was utilized on a large scale with beneficial results, but not to the exclusion of surgery or medicine.

The paper is good, the print clear, and the illustrations decisive. D. M. B.

PLASTIC SURGERY OF THE NOSE, EAR AND FACE

By Victor Frühwald, M.D. Translated by Geoffrey Morey, M.B., B.S., D.L.O. 86 pages, with 88 illustrations. Wilhelm Maudrich, Publisher, Vienna, 1932.

This volume has been prepared to supplement the lecture course given by Dr. Frühwald in his clinic at Vienna in the hope that it would not only render his presentation more readily understandable, but also that it would serve as a reminder of the course to

those who had received this instruction. Being an English translation, the volume will appeal to those physicians who are unable to attend the Vienna clinics since it brings a number of the more common surgical procedures to their own desks.

The author treats plastic or cosmetic surgery, dealing with the deformities of the nose, deformities of the ear, and those operations intended to remove wrinkles and folds of skin for strictly cosmetic reasons.

The volume is extensively illustrated so that the average skillful operator will have no difficulty in reproducing these surgical procedures.

POSTURE—ITS RELATION TO HEALTH

By Frank D. Dickson, M.D.—Orthopedic Surgeon, Saint Luke's Hospital and Kansas City General Hospital, Kansas City, Mo.—(Everyday Practice Series, Edited by Harlow Brooks, M.D.)—213 pages, 118 illustrations—J. B. Lippincott Company, Philadelphia and London, 1931—Price, $5.00.

From the earliest periods of warfare, military training has always carried instruction in correct posture since it has been correctly assumed that the efficiency of the soldier was increased if his posture was of the best. In modern schools it has been recognized that the efficiency of the pupil was in a considerable measure determined by his posture. In orthopedic clinics posture has been recognized as a causative factor in the production of many abnormal conditions.

Dr. Dickson in this volume attempts to create a practical interest in this subject and acquaint the reader with the preventive influence which a proper posture exerts against the development of disease. His chapters on Posture and Human Efficiency, and Posture in Children, will be of vital interest to every physician, teacher and parent. The chapter devoted to Postural Exercises presents exercises directed toward prevention and correction of deformities.

While some of the illustrations used throughout the text could be improved upon, the majority are of good quality.

PRINCIPLES OF CHEMISTRY

An Introductory Textbook of Inorganic, Organic and Physiological Chemistry for Nurses and Students of Home Economics and Applied Chemistry. With Laboratory Experiments. By Joseph E. Roe, Ph.D., Professor of Biochemistry, George Washington University Medical School. Third Edition. The C. V. Mosby Company, St. Louis, 1932. Price, $2.50.

This is an exceedingly interesting volume for an ordinary textbook, and it is apparent that it has been prepared by a real teacher of chemistry. The students of home economics or the student nurses for whom this text was prepared should have no trouble in mastering the principles of chemistry.

The reviewer found chapters nine, twenty, and twenty-two especially interesting and the subjects discussed very understandable.

R. L. P.

THE PRACTICAL MEDICINE SERIES

The Eye, by E. V. L. Brown, M.D., Professor of Ophthalmology, University of Chicago; and Louis Bothman, M.D., Associate Professor of Ophthalmology, University of Chicago—*The Ear, Nose and Throat*, by George E. Shambaugh, M.D., Professor of Otology, Rhinology and Laryngology, Rush Medical College, and Elmer W. Hagens, M.D., Instructor in Otology, Rhinology and Laryngology, Rush Medical College—Series of 1931—The Year Book Publishers, Chicago—Price, $2.50.

This volume covering reviews of the foreign and American literature, on the eye, ear, nose and throat, maintains its past high standard of excellence. It should be on the desk of every practitioner of these specialties. R. R. S.

THE ROCKEFELLER FOUNDATION

Annual report, 1931, The Rockefeller Foundation, 61 Broadway, New York.

This annual report of the Rockefeller Foundation for 1931 impresses the reader with the fact that the chief interests of the Foundation today are in the advancement of research.

The Foundation provided 353 fellowships in medical science. These fellowships have been awarded in the various universities of the United States and in foreign countries at a cost of over three million dollars. The Foundation has promoted the study of virus diseases, puerperal fever, neurology, serology, biochemistry, dental pathology, and the common cold. The Foundation has actively supported projects in public health and has awarded fellowships to 123 students in this field. The entire appropriations of the Rockefeller Foundation for 1931 amounted to over eighteen million dollars, of which the largest appropriation was for the social sciences and amounted to $5,805,275.

THE SPUTUM

Its Examination and Clinical Significance—By Randall Clifford, M.D., Associate in Medicine, Peter Bent Brigham Hospital, Boston. 167 pages, illustrated. The Macmillan Company, New York.—Price, $4.00.

Throughout the history of modern medical science the examination of the sputum has been recognized as a valuable aid in the diagnosis of respiratory tract diseases. While instruction is offered in most medical courses in the more common procedures for the examination of the sputum, few physicians in private practice equip themselves to carry out these pro-

cedures. This is due largely to the fact that state or municipal laboratories are provided for sputum examinations for the tubercle bacillus, and since this is the most common organism sought for in sputum, equipment is not maintained in the average physician's office for the other useful observations which may be made.

This volume offers in a condensed and orderly fashion the necessary information for a complete and thorough examination of sputum. Succeeding sections deal respectively with the collection, disinfection and types of sputa. The macroscopic and microscopic examination of sputum, and the character and clinical significance of the sputum in some of the more common diseases of the bronchi and lungs.

At the close of each chapter is presented a bibliography of the more important authorities quoted in that chapter. All of the required information concerning stains and staining methods are presented. The volume is adequately and well illustrated by numerous black and white as well as colored illustrations.

The volume will be found invaluable in commercial or hospital laboratories, in the office of the specialist on chest diseases, and as a handbook for the general practitioner, especially those who do not have ready access to well conducted commercial laboratories.

SURGICAL CLINICS OF NORTH AMERICA

(Chicago Number, October, 1932)—Vol. xii, No. 5—268 pages with 61 illustrations. Per clinic year, February, 1932, to December, 1932—paper, $12.00; cloth, $16.00. W. B. Saunders Company, Philadelphia and London, 1932.

This number covers a wide range of subjects. Gall bladder disease in its medical, diagnostic, and surgical phases, with especial reference to technic, is treated in the manner of a symposium by Drs. Abbott, Rose, and Bevan. Dr. Ryerson presents an interesting series of bone tumor case histories with x-rays and discussion of each case. Dr. Kretchmer enumerates the many advantages of electroresection of the prostate and is apparently enthusiastic about its possibilities. Surgical treatment of pulmonary tuberculosis is discussed by Drs. Hedbloom and Van Hazel with nothing particularly new being presented. Electrocoagulation in otolaryngology is discussed by Drs. Shambaugh, Younker, and Dougherty. They feel that electrocoagulation offers a satisfactory method of treating epistaxis, dilated blood vessels, for shrinking the turbinate bodies, and in operating certain malignancies. They indicate that it is disappointing in tonsil work. Dr. Heaney discusses the use of radium in benign diseases of the female pelvis, and, for the most part, condemns it. Chordotomy is fully discussed by Dr. Olberg, covering indications, contraindications, and technic. Dr. Bucy reports three cases with blood vessel tumors of the spinal canal. Other cases are also presented dealing with urology, obstetrics, and general surgery. F. W. F.

SURGICAL CLINICS OF NORTH AMERICA

Mayo Clinic Number—August, 1932. Volume xii, No. 4. (Issued serially, one number every other month.) 227 pages with 79 illustrations. Per clinic year, February, 1932, to December, 1932. Paper $12.00; cloth $16.00. W. B. Saunders Company, Philadelphia and London, 1932.

This volume contains a considerable number of case reports of rather rare conditions. Many of these are tumors such as mesenteric cysts, malignancy of the intestinal tract, diaphragmatic hernias, aneurisms and cystic renal tumors. One striking feature of these reports is the unusual number of favorable results obtained, there being only one death reported and that was due to the metastatic melana, epithelioma of the brain. There are considerable number of case reports, however, where the reader is left at sea regarding the results obtained. Hiram E. Essex and John S. Lundy report the use of a new anesthesia known as pantocain which is apparently efficient and has a prolonged anesthetic action.

F. W. F.

SKIN DISEASES AND NUTRITION

Including the Dermatoses of Children. By Erich Urbach, M.D., Dozent in Dermatology at the University of Berlin. Authorized English Translation by Frederick Rehm Schmidt, M.D., Attending Dermatologist and Syphilologist, Alexian Brothers Hospital, Grant Hospital and United States Marine Hospital. 242 pages, illustrated. Wilhelm Maudrich, Vienna, 1932. Price $7.00.

This is the authorized English translation of a volume which originally appeared in German. It is unique in that it presents those dermatologic conditions resulting from peculiarities or indiscretions in diet. Certain nutritional diseases have long attracted attention. During the past decade dermatologists have directed attention toward those allergic conditions produced on a basis of protein sensitivity. The author of this volume attempts to bring all of these various conditions together in one concise text. Since the volume is small, the thoroughness with which the various subjects have been discussed is surprising. Because of its thoroughness, the volume will appeal to both the specialist and the general practitioner. Those familiar with the subject will appreciate the continental viewpoint expressed by the author, whereas those of lesser experience will find a complete guide to the recognition and the management of these difficult cases.

In the early parts of the book, the author takes up the various skin diseases due to malnutrition and functional disturbances of the digestive tract, including those dermatoses caused by nutritive idiosyncrasies. In the second part he treats specifically some thirty or forty skin conditions, depending the-

oretically on nutritive factors. The volume is one of the most useful in this particular field, which has come to our attention.

SURGICAL CLINICS OF NORTH AMERICA

(Issued serially, one number every other month.) Volume 12, No. 3. (Lahey Clinic Number—June, 1932) 299 pages with 123 illustrations. Per clinic year (February, 1932, to December, 1932.) Paper, $12.00; Cloth, $16.00 net. Philadelphia and London. W. B. Saunders Company, 1932.

Biliary tract disease is always of interest and lends itself readily to a symposium. These articles are as follows: The present management of biliary tract disease, the surgical management of obstructive jaundice, obstructive jaundice due to stricture of the common duct, the sedimentation rate in obstructive jaundice, report of three unusual cases of jaundice and silent rupture of the gall-bladder producing large subdiaphagmatic abscess. These articles are excellent and present the present status of biliary tract disease in a clear concise manner.

The carbon dioxide absorption method of gas anesthesia is thoroughly explained.

As one would expect there are several articles on different phases of thyroid disease.

Two valuable clinical hints are given, one on drainage in breast amputation wounds and method of securing gauze dressings on draining wounds, a rather simple ingenious procedure. F. W. F.

UNIVERSITY STUDENT HEALTH SERVICES

A Study of Organization, Services Rendered and Costs in Cornell University, Yale University, the University of Michigan, the University of Minnesota, the University of California, and Oregon State Agricultural College.—By Don M. Griswold, M.D., Dr. P. H. and Hazel I. Spicer.—(Pamphlet—Publications of the Committee on the Costs of Medical Care: No. 19)—The University of Chicago Press, Chicago, 1932.—Price, ninety cents.

This survey reports the operation of student health services as employed in various educational institutions throughout the United States. The institutions studied are: Cornell University, Yale University, University of Michigan, University of Minnesota, Oregon State Agricultural College, and the University of California. Four of the student health services studied are practically self-supporting and range in cost from $9.66 to $16.78 per eligible student. If these four services were operated on an annual basis, from $14.00 to $24.00 would be required to provide adequate care. The committee does not conclude that adequate medical care could be given an unselected group of individuals of varying age at this same cost, since they believe that the low figures shown were possible only because of the select group of young individuals concerned.

The report may be accepted as typical of the student health services of the better sort offered in American teaching institutions.

VARICOSE VEINS

By H. O. McPheeters, M.D., F.A.C.S., Director of the Varicose Vein and Ulcer Clinic, Minneapolis General Hospital. Illustrated with 62 halftone and line engravings. F. A. Davis & Company, Philadelphia, 1931. Third edition. Price, $3.00.

The reviewer has had the pleasure of listening to a complete review of the treatment of varicose veins by the author, who is an enthusiastic lecturer, teacher and clinician. This volume merits the author's enthusiasm. The subject of varicose veins is thoroughly covered from the standpoint of anatomy, embryology, etiology, diagnosis and treatment. The author has had a vast experience in the injection treatment of varicose veins with uniformly good results. He employs multiple injections at one sitting. His views are conservative and his treatment simple. The paper is of good quality and the volume is well illustrated. There is a complete bibliography which should be of value to anyone desiring further information regarding the subject. D. M. B.

THE WAY OF HEALTH INSURANCE

By A. M. Simons and Nathan Sinai, D. P. H. Publications of the Committee on the Study of Dental Practice of the American Dental Association: No. 6. Published by the University of Chicago Press. Price, $2.00.

Economists say there are millions of lower-paid workers in the United States who cannot pay for adequate medical care nor meet the expense of living when sickness interrupts earning power. Almost all European countries have enacted compulsory health insurance laws to care for such people. That the United States will eventually adopt similar measures seems almost certain. Workmen's compensation laws and group insurance are steps along the road. Health insurance bills are now before the legislatures of several states. Before compulsory health insurance is adopted in this country, we need to know how it operates in foreign countries so that we may choose the best and avoid the errors and pitfalls. Especially should physicians and dentists stop and think how they will be affected, in order that they may take a part in formulating the policies and practices to protect their professions and their patients.

This book is a history of health insurance systems, and a detailed report of two years' field investigation into the actual workings of the systems of Germany, Great Britain, France, and numerous other European countries. The inquiry was sponsored by the American Dental Association and financed by the American College of Dentists, to present all medical and dental phases of this complex problem.

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A DISCUSSION OF THE FINAL REPORT OF THE COMMITTEE ON THE COSTS OF MEDICAL CARE.*

OLIVER J. FAY, M.D., Des Moines

After a five year fanfare of journalistic trumpets, the Committee on the Costs of Medical Care has launched its final report, entitled "Medical Care for the American People." That report has already been the subject of wide comment in the lay as well as in the medical press. One widely read journal, in whose editorials and articles the medical profession has often been subjected to sharp criticism, says editorially that it had believed that out of all the effort and expense involved there would surely come some solution of the two-fold problem presented by the inability of the majority of people to pay the present high costs for the cure of illness, and the collateral inability of the doctors to earn incomes commensurate with the expense of their training; but that "the mountain has labored in vain, it has brought forth a mouse." A mere mouse, however, may stampede a herd of elephants, and since this pet mouse of the Committee on the Costs of Medical Care bears all the earmarks of state medicine, it behooves not only us of the medical profession but the general public as well to give it careful consideration. The medical profession, with its long record of signal achievements, as an ancient, an honorable, an independent profession, cannot look with indifference upon any plan which would make that profession subservient to a bureaucracy that would dictate its every action, control alike its ethics and its finances. The public, on the other hand, already groaning under the increasing burden of a tax-eating bureaucracy, may well view with even greater alarm the proposal that the cost of the medical care of the nation, expanded, augmented, and pyramided as our lay politicians may see fit, be added to that burden.

Before considering the recommendations of the Committee, it may be well to gain some idea of who and what this Committee is, and upon what basis its recommendations rest. Almost seven years ago, some fifteen leaders—that designation is the Committee's own—in the field of medicine, public health, and the social sciences met to consider the problem of inefficient and insufficient medical service, the dissatisfaction of the public with the cost of such medical service, and of the medical profession with the average physician's income and working conditions. A new Committee of five was appointed to study the need of a second committee to investigate these problems, and a little over a year later, the nucleus of the present Committee was created at a second meeting. During these past five years, there have been fifty-six members of this Committee, less than one-third of whom were engaged in the practice of medicine. There were forty-eight members of the Committee at the time the report was ready for publication; of the sixteen physicians then members of the Committee, eight signed the minority report, rejecting the conclusions of the majority report, and pointing out the lack of integrity of the foundations upon which these conclusions were based. The Committee had employed an Administrative Staff, consisting of Doctors of Philosophy to serve as Director of Study, Executive Secretary and Field Secretary, respectively; on the Research staff, the Associate Director of Study and the Statistician were also Doctors of Philosophy. Sixty-six other persons are listed as associated staff members, the list not including those employed on a temporary basis. A total of almost a million dollars was expended, twenty-seven published reports of surveys were issued before this final report was given to a waiting world. The minority group believes that these surveys and reports give a much distorted view of the questions they purport to clarify, inasmuch as the studies published by the Committee were too often those which threw the most favorable light upon the beliefs held by the Committee, and that

* Presented before the Des Moines Academy of Medicine and Polk County Medical Society, Des Moines, January 31, 1933.

for each of these successful experiments, a score of unsuccessful ones might have been found. During the latter part of the five-year period a publicity staff was maintained to bring the recommendations of the Committee to the attention of the general public and the professions and agencies interested. Immediately following the final meeting of the Committee, a new organization was formed to further the work of putting into effect the recommendations of the Committee. I have nowhere seen a list of its present membership, but in the light of its past activities, it seems safe to assume that it has sloughed off any members who lacked faith in its promised Utopia. Its publicity staff at least has been maintained and is functioning actively.* Contacts are being made with some member or members of the medical profession in communities throughout the country urging them to take the necessary steps towards community organization of medical clinics. In short, the Committee on the Costs of Medical Care has shed its cocoon and has come forth in all its glory as the protagonist of state medicine, with the evident intention of forcing the acceptance of its doctrines by the medical profession, whatever the attitude of this profession may be; and yet the physician's work would after all form the keystone of the Committee's proposed setup.

Considering the majority report as a whole, one is impressed by two characteristics; a general critical attitude towards the medical profession, an attitude intentionally or unintentionally calculated to shake the confidence of the public in the integrity and ability of the physician, and the very evident lack of unanimity among the majority members presenting the report. At one point we are informed that "many persons do not receive medical service which is adequate either in quantity or quality;" at another, that one of the great problems in our present system is the difficulty of lay selection of a competent physician; yet it is urged that all or practically all the physicians of a community should be included in the community medical center. Is there then some alchemy in group medicine which will turn the dross of ignorance and lack of principle into the precious metal of scientific knowledge and high ideals? It is stated that the sliding scale of medical fees is one of the causes of dissatisfaction, since those of larger incomes feel that they are discriminated against when asked to pay a larger fee than is collected from the poor patient. On the other hand the Committee points out that it is impossible for the smaller income group to pay for needed medical services, that the physician must have a more adequate income, the public in general more satisfactory service, and suggests that the community supply the needed medical support through taxation; in other words, that the increased burden be shifted to the larger income group. Who, save the Committee, is possessed of so childlike and dewey-eyed a faith as to believe that the public considers the paying of a national medical bill through increased taxation a painless extraction?

In order to evaluate the recommendations of the Committee from the standpoint of organized medicine, let us consider the five general recommendations of the Committee together with a brief resumé of the Committee's explanation of them.

Recommendation I. "The Committee recommends that medical service, both preventive and therapeutic, should be furnished largely by organized groups of physicians, dentists, nurses, pharmacists, and other associated personnel. Such groups should be organized, preferably around a hospital, for rendering complete home, office, and hospital care. The form of organization should encourage the maintenance of high standards and the development or preservation of a personal relation between patient and physician."

It is the belief of the Committee that many of the difficulties in present medical practice can be overcome, wholly or in part, by group organization in medicine. Some of these difficulties are: the lack of coordination between general practitioners and specialists; the isolation of some practitioners from helpful contacts with their confreres and from hospitals and medical agencies; the lack of adequate supervision and control over the quality of medical care, especially the lack of any effective control over specialization; the enforced idleness of many physicians because of lack of patients; the difficulty experienced by patients in choosing qualified physicians; the unnecessarily large expenditure for overhead costs made by practitioners in individual private practice; and the increasing complexity of medical service which necessitates the use of ever-multiplying equipment, as well as a larger number and variety of subsidiary personnel.

These, then, are the difficulties and shortcomings which the Committee seeks to overcome through its first recommendation, the basic recommendation that the group and not the practicing physician be made the unit of medical practice. The Committee envisages our hospitals, our universities, our large industrial plants as the nuclei of medical groups, with the smaller communities which cannot support such major institutions, brought into the organization as subsidi-

*Since the above was written, the official work of this committee, the Advisory Public Relations Committee, appears to have come to an end.

ary groups referring patients requiring any specialized care to the larger center. All phases of public health work and medical care would be brought under the control of these central units; preventive and therapeutic medicine, dentistry, the dispensing of drugs, nursing care and household management when needed would be controlled and supplied by a community medical center. These medical centers are to be managed by councils or community boards on which the medical and dental profession is graciously to be accorded some representation along with representatives of the public, or community organizations, such as welfare committees, and of nursing organizations. The physicians are to have control of purely professional matters, *subject to the approval of the board*—the latter a provision which the medical profession should not overlook.

Recommendation II. "The Committee recommends the extension of all basic health services—whether provided by governmental or non-governmental agencies—so that they will be available to the entire population according to its needs. Primarily this extension requires increased financial support for official health departments and full-time health officers and members of their staffs whose tenure is dependent only upon professional and administrative competence."

The Committee points out that the United States spends only $1.00 per capita for public health services to every $29.00 for other medical services. As a consequence public health service in the United States—both governmental and non-governmental— is far from adequate. In towns and rural areas it is usually rudimentary. Public health work does not attract so many well-qualified medical students as it should, because tenure is frequently uncertain and subject to political influence, and because lack of adequate financial support often makes the remuneration low and restricts the opportunities for effective work. Considering its potentialities for raising the general level of health of the people at relatively low cost, the public health service in the United States is very deficient.

The Committee points out that generally accepted public health functions are: (a) the collection and analysis of vital statistics; (b) the control of water, milk, and food supplies; (c) the control of sanitation; (d) the control, through quarantine and supervision, of communicable diseases; and (e) the provision of laboratory service. It expresses the belief that the following are also proper public health activities: (f) the promotion of maternal, infant, and child hygiene, including medical and dental inspection and supervision of school children; (g) popular health instruction; (h) the provision of preventive dental care for children, and (i) the provision of special services for the prevention, diagnosis, and treatment of patients with tuberculosis, venereal diseases, malaria, hookworm, and any other disease which constitutes a special health problem in the community that cannot be solved adequately and effectively by the other available medical and health agencies. It anticipates that $2.00 to $3.00 per capita annually should be allowed local health services to enable them to meet accepted standards.

Recommendation III. "The Committee recommends that the costs of medical care be placed on a group payment basis through the use of insurance, through the use of taxation, and through the use of both these methods. This is not meant to preclude the continuation of medical service provided on an individual fee basis for those who prefer the present method. Cash benefits, i.e., compensation for wage-loss due to illness, if and when provided, should be separate and distinct from medical services."

The Committee believes that since the costs of medical care fall very unevenly on different families in any one year and on the same family in different years, that it is impossible to budget such costs accurately on an individual family basis; that for the low-income families, who constitute the great majority of the population, present expenditures are not only uneven and unpredictable, but also much too low in total to provide adequate medical service; that the population as a whole, except in hard times, can, however, pay for adequate medical service without hardship. Varied suggestions are made as to the methods for carrying out group payment for medical services. The Committee recommends that organized groups of consumers, such as industrial, fraternal, educational, or other reasonably cohesive groups pay agreed annual sums in weekly or monthly payments into a common fund, arranging with organized clinics, hospital medical staffs, or community centers to furnish them and their families with virtually complete medical service. Some members of the Committee believe that such insurance should be made obligatory for certain income groups, certain occupations, or certain areas. It admits that certain groups cannot pay the full cost of complete medical service even on a periodic basis and believes that in these cases, such payments should be supplemented by community payment from a tax fund. In rural areas and those of low economic resources, the Committee believes that physicians should be subsidized, or employed on salaries to

furnish general medical services to the residents of the community. Where the low per capita income makes it impossible to meet the medical needs of the community from local tax funds, such funds should be supplemented by state funds, or if these prove insufficient, by federal aid.

Recommendation IV. "The Committee recommends that the study, evaluation, and coordination of medical service be considered important functions of every state and local community, that agencies be formed to exercise these functions, and that the coordination of rural with urban services receive special attention."

The Committee feels that this step could and should be put into effect in the immediate future, and that to this end, appropriate medical, dental, nursing and pharmaceutical societies should appoint committees to ascertain the facts regarding the provision of medical service, to study the various possibilities for extending the service, and to prepare local or state plans accordingly. To provide a full and balanced view of problems and needs, to contribute administrative experience, and to give added weight to such recommendations, such committees should include informed lay persons and should establish cooperative relations with official health agencies and with representatives of appropriate health organizations, such as community chests. In each community permanent, local agencies should be established to evaluate and coordinate the existing preventive and curative medical services, to eliminate services not needed, and to stimulate the provision of additional services which are needed. Such agencies should make a continuing study of the problems of organization and payment, and should prepare a plan for progressive development. They should include representatives of the public, the medical profession, the health agencies, the hospitals, and the social agencies. They may well grow out of existing health and hospital councils or public health councils. Sufficient funds should be provided for executive and secretarial service, such funds to be provided by community chests, chambers of commerce, and local governmental or voluntary health agencies. As soon as possible, like coordinating agencies are to be established for each state, these bodies also to include representation from the public, from the medical, dental, nursing, and pharmaceutical professions, from the public health services, the hospitals, and the voluntary social agencies (the order and the organizations are as cited by the Committee, which repeatedly places public before medical representation).

Recommendation V. "The Committee makes the following recommendations in the field of professional education: (A) that the training of physicians give increasing emphasis to the teaching of health and the prevention of disease; that more effective efforts be made to provide trained health officers; that the social aspects of medical practice be given greater attention; that specialties be restricted to those especially qualified; and that postgraduate educational opportunities be increased; (B) that dental students be given a broader educational background; (C) that pharmaceutical education place more stress on the pharmacist's responsibilities and opportunities for public service; (D) that nursing education be thoroughly remoulded to provide well-educated and well-qualified registered nurses; (E) that thoroughly trained but competent nursing aides or attendants be provided; (F) that adequate training for nurse-midwives be provided; and (G) that opportunities be offered for the systematic training of hospital and clinic administrators."

Such then are the recommendations of the Committee on the Costs of Medical Care, and their own reasons and explanations for them. Their keynote has become *not* the costs of medical care, but group practice under lay or state supervision, so that our discussion centers primarily upon this point.

Group practice is a child of the twentieth century. Its birth was heralded as that of a new era in medicine. It is a bit difficult to recall the exact nature of the rosy haze that surrounded the magic name of clinic, when the clinic idea first burst upon our dazzled vision, but the Committee's own report probably describes that aura when it says that "from a physician's point of view the clinic organization has the advantages that his time is conserved, the spread between gross and net income is diminished, a large amount of equipment is usually available, consultation with colleagues is facilitated, vacations and opportunities for postgraduate study are more readily provided, net income tends to be higher and stabilized, records are more nearly complete, and research is facilitated through the existence of a larger number of records." Some of these advantages are undoubtedly real, others are found to be more apparent than real when the clinic idea is actually put into practice, or they are greatly outweighed by disadvantages which had not been taken into consideration when the group was organized as a clinic. The Committee reports that there are now some two hundred clinics in this country. It is safe to say that during the past dozen years several times this number have tried the experiment of group practice and have found it want-

ing. Some clinics have been notably successful, sometimes from a scientific as well as from a financial point of view—of these we have all heard. A far greater number have sunk into innocuous desuetude; we have only a vague recollection of having heard that the physicians in this or that community have tried the experiment of group practice and have abandoned it. The staff members of such clinics often retain a very clear memory of their experiment, having gained *experience* at the price of financial sacrifice and the scars of professional jealousies. For them, the idea of group practice is no novelty, but also it has no allure. You and I, having no such bias, are willing to admit that under special conditions, and for the most part in urban surroundings, group practice sometimes may best meet special needs, but few of us are so childishly optimistic as to feel that the very real problems of medicine, problems which are at least as acute in our small towns and in the thinly populated areas as in our larger centers, can be solved, or even made less acute by group practice. In or out of an organization, the quality of medical service rendered depends upon the quality of the man rendering it. It may sound well to say that under group practice the physician is answerable to the group and not to himself alone for the quality of his work, but in reality in any system of medicine which safeguards the personal relationship of physician and patient, the physician is answerable only to himself and to God for the quality of his work. However little confidence the Committee may have in the integrity of the medical profession, it has not and cannot devise any system of check-up to supersede or to equal the physician's conscience; medical services cannot be passed under the eye of a checker like a box of freshly packed bonbons or a box of cigars; and if such a check-up were possible, we should merely replace a possibly existing evil by a potentially greater one.

Granted that the quality of medical service could and should be improved, I believe that such improvement is only possible through improving the type of men entering the practice of medicine, the quality of the training they receive, and their opportunity for keeping in touch with medical progress after they have entered practice. Medicine is not an exact but a growing science and as such it makes a particular appeal to the man with an inquiring mind who likes people, and who wants to serve them. Any system of medical practice which would make of its practitioners mere cogs in a machine would not attract a higher type of men to the profession; on the contrary, we should have to reckon with the fact that under such a system, the future would see men of lesser and not of greater ability entering the profession, or shall I say the trade of medicine? We of the medical profession have honestly tried to raise its standards. Every law which has been passed raising the requirements for licensure has had not only medical endorsement but has originated with the medical profession. And as we have raised our own standards our lawmakers have let down the bars to the practitioners of this and that -pathy and cult, allowing men with a grade school education, and a few months of special, or so-called special training, to treat the sick. If we protest, we are cried down as members of a medical trust. If we are silent, we have failed in our duty to protect an uninformed public. Is it by accident that the term "practitioners" instead of "physicians" is used over and over again in the report of the Committee, or is it because the Committee intentionally leaves the back door open to the left-handed schools of healing, realizing that that portion of our population who are believers in this or that cult or -pathy would bitterly oppose community clinics that failed to recognize and give support to schools of so-called healing? We may admit that each man has a right to live and die as he sees fit, so long as in so doing he does not endanger others; we may admit that the Committee, actuated by only one idea, that of forcing through its pet scheme of state medicine, does well to mask such troublesome details with its obscure terminology; but should we of the medical profession be expected to overlook such vital considerations, to acclaim the idea of group practice which grants an equal standing to the man who has spent a few months in acquiring a pseudo-medical patter and the title of doctor, and the man who has given years of his life to fitting himself for the practice of medicine? The medical profession has always prided itself upon its altruism; in this as in all other things, we should be willing to put the welfare of the public before our own interests, but who among you can honestly believe that we are being true to our sacred trust to the public, can believe that we are improving the quality of the medical service given the public, by stepping down to the level of the left-handed practitioner? Will the fact that the man with little general education and a few months of pseudo-scientific training is granted parity with the man who has spent the years from six to twenty-five or thirty preparing for his professional work, inspire the most desirable type of man to enter the profession of medicine? In the report great emphasis is laid upon the need for continuing postgraduate work, and the oppor-

tunity for such work afforded by group practice. Of what value is postgraduate study to the man who lacks even fundamental training? And what spur to the physician, unless he be the true scientist who loves science for science' sake alone, to undertake further studies when in spite of the added years of training which he has already received, the practitioner of this or that left-handed school of healing ranks him?

With the Committee's second recommendation, that all basic health services be extended so that they will be available to the entire population according to its needs, we can have no quarrel—provided always that there is a clear understanding of what constitutes public health services. The compilation and study of vital statistics, the study and control of epidemics, the control of water, milk, and food supplies, and of sanitation in general are services which obviously can best be rendered by the government, and which should logically be so rendered since these services concern not the individual but the community and the nation. We have no quarrel with the inclusion of public laboratory services, though the advisability of providing such services, when the cost is taxed to the physician, may perhaps be questioned. If laboratory services are a public health service, then such services are rendered for the good of the community as a whole, and there would seem to be small justification for collecting a fee from the physician who is too often forced to pay it from his own purse. If it is argued that it is a service for which the patient himself should be expected to pay, then there would seem to be little reason for the state subsidizing laboratories to enter into competition with private laboratories. No one will gainsay the importance of the promotion of maternal, infant, and child hygiene, including medical and dental inspection and supervision of school children, but there may well be a question as to the expediency of turning this problem over to the public health service. The idea is not a new one, and during the past few years in which a solution to the problem of maternal and infant welfare has been sought through our public health services, there has been little or no progress recorded. Perhaps it is because the public health handling of such a problem is necessarily an impersonal one, in spite of the use of pseudo-personal letters of congratulation to prospective fathers, while the problem itself is essentially a very personal one.

What is true of this is also true of popular health instruction. It is most desirable that information on so-called popular health topics be widely disseminated, but long experience has shown that the impersonal dissemination of such knowledge is almost valueless. Information on all matters of health loses force with the square of the distance traveled; it is most effective when it is imparted directly by the patient's own physician. If he is not competent to give such instruction, he has no place in the ranks of the profession; the State Board should see that his license to practice is revoked. If he is competent, no impersonal agency, be it state or federal, can so efficiently care for the problems of maternal and child welfare, or so effectively impart so-called popular health instruction, which is only too often unpopular when it lacks the personal touch. If it is argued that this state and federal instruction is intended primarily for those who cannot afford to employ a personal physician and that the medical profession is already overburdened with the care of indigent patients, a burden which should in fact belong to community and state rather than to the medical profession, would it not be wiser for the state to assume the financial, the practicing physician the professional burden of this work? It may well be that it would be wise economy for the state to expend two or three dollars instead of the single dollar per person which it now expends, but these monies should be spent in the care of the public health, and not in entering into the private practice of medicine in competition with the practicing physician.

The financial equation assumes a sinister aspect in the Committee's third recommendation, though the full force of its revolutionary nature becomes apparent only when the report is read in its entirety. The Committee points out that it is obvious that the public cannot or will not bear the expense of adequate medical care; that this cost is felt as a special burden because it is not predictable, and is not evenly distributed between families and over a course of years. The uneven distribution of blessings and burdens is not limited to illness and medical expense but is so common a human experience, be the point at issue alopecia or hypertrichosis, buns or babies, that it would seem difficult to supersede Providence, or if we feel equal to the part of playing super-divine arbiter, to find a practicable stopping place anywhere short of Soviet communism. As a first suggestion, the Committee would inaugurate group insurance—an experiment which has, by the way, often been tried and except under certain particularly favorable conditions, as often found wanting. They suggest, as an entering wedge, that large groups of people, not less than five thousand and preferably ten, with some industrial group or fraternal organization as a nucleus to prevent selective discrimination against the insurance plan, be supplied with a complete medical service by a

group of physicians, dentists, nurses, and the necessary associated personnel built up about a hospital center. This medical service would be complete, covering not only needed hospital, dental and medical care, and all medicines, but the services of a nurse or a housekeeper when needed in the home as well. We will admit that all of these things are essential to the optimum care of the sick, but why stop here? A well heated and ventilated home, good food, and freedom from care are all too often also needfuls that are lacking; are these too to be supplied? The Committee admits that the cost per person will be greater than that now usually borne, and it has already admitted that the public is often not only unable but also unwilling to meet even the present expense. Yet the Committee would have us believe that the public will cheerfully pay this increased cost in times of good health in order to have medical care when it is needed. It is proverbial that, "When the devil was sick, the devil a monk would be, but when the devil was well, the devil a monk was he." Do you who have been on the firing line, believe that the well will voluntarily pay an increased medical bill year after year in anticipation of a possible future illness, when they are now unwilling to pay a lesser bill in the presence of actual sickness?

Even the Committee obviously has its misgivings, and we find that while a majority of the Committee consider voluntary insurance a logical first step, a practicable method of getting the camel's nose in the tent, many of the Committee members believe that it would not be effective and insist that compulsory insurance should at once be instituted, at least for certain income groups, certain occupations, and areas of low economic status. It is admitted that people with low or irregular incomes, even if self-supporting while employed, cannot usually be covered by any form of voluntary insurance. People who are engaged in small business enterprises or who are self-employed are also not likely to carry this voluntary health insurance unless it promises a material saving. This is to say they would not carry it at all, for the type of coverage suggested would undoubtedly be at a marked increase in cost. The administrative cost of such insurance would in itself much more than offset the questionable savings which would, in the eyes of the Committee, accrue from centralization of offices and personnel, and the employment of lay executives to run the doctors' business. In making estimates for the coverage of industrial insurance, the coming of which some of our insurance companies eagerly anticipate, these companies have estimated the payments to physicians at 45 per cent, to hospitals at 12½ per cent with the 42½ per cent remaining for the administrative costs and profits of the companies carrying the insurance. In England, one company is said to have estimated the payments to physicians at 25 per cent, the remaining 75 per cent to cover administrative loading and profits. We physicians may be visionary, impractical, and inefficient in business, yet even we should be able to understand that this represents the exploitation of the physician and the public to an unprecedented extent. In fact, any method of voluntary or even regional compulsory insurance holds possibilities for grave abuses because of the difficult financial problem it presents and the resulting danger of commercialism. Insurance of large groups of people under any voluntary plan which would provide for medical care to be given by a group of physicians is the simplest, the most direct plan, but it does away with none of the evils which are now existent. It offers opportunity for competitive bidding between groups with the attendant poor quality of service always rendered under such circumstances; it does not do away with the fluctuating income of the physician, since the latter's income, then as now, would be dependent upon the employment and continued income of the insured, and on the latter's willingness to continue on the insurance plan. The insured, always on the defensive lest he receive less than he feels he is entitled to, would on the whole be more antagonistic towards the medical profession than he is as a private patient. If we make insurance compulsory for certain employed groups, the check-off method of collecting the insurance might be employed, perhaps supplemented by enforced contributions from the employer. The medical profession might overlook the fact that it would be employing the methods and placing itself on the plane of the trade unions; it would be difficult to overlook the fact that in a prolonged period of widespread unemployment, such as during the era through which we are now passing, the income for these medical groups would be entirely shut off, the need of the quasi-insured group for medical care would not be lessened. Moreover, except during such a no-income period, we would have the evils of contract practice in its worst form with which to contend. The selection of physicians would actually, if not nominally, rest with the employer who would be apt to shop about for medical service as he does for floor mops and lead pencils. Theoretically, it would be to his advantage to employ only the most competent medical attendants for his employees. In practice, how many employers are so far-sighted, or, if they do desire the best, are competent to select it? The Committee's report

has shattered any faith we may have had in the ability of the layman to select a medical attendant.

The Committee believes that "these dangers would be obviated in part if all voluntary health insurance were offered by community medical centers with financial control by representatives of the public and professional control by participating practitioners. Further safeguards would be erected if state or national medical and dental societies formulated standards for the organization of group practice and set minimum fees for group purchase arrangements of various types. Each medical group which offered voluntary health insurance could then be inspected and graded, as hospitals and medical schools are now graded by national professional organizations." The general scheme suggests an automobile in which the gas feed would be under the control of the backseat driver. So much for its operating efficiency. We find the touchstone for the professional standing of this arrangement in the Committee's own reference to "group purchase arrangements." Do you and I think so little of our profession that we are willing to see it thus degraded, to place ourselves on a par with the clerk in the cut-rate drug store? We have all seen something of the work of national organizations in grading medical and allied institutions. It has perhaps accomplished something, though whether or not the same ends might not have been achieved in other and better ways is open to question, but as we observe these cut and dried inspections, as we read the theoretical reports and compare them with actual conditions as we know them to exist, who among us can pin his faith to the effectiveness of such theoretical control in combating the very real evils of this health insurance scheme?

And thus we are led by easy steps, as it were, to view in a favorable light the Committee's fetish, group practice under state and federal control, for if all these proposals are weighed in the balance and found wanting, we are urged to believe that group medical practice under state control would ultimately solve most of the problems of medical care. For the control of the troublesome problem of competition it suggests the following devices (a word which would seem particularly well chosen to desigate its suggestions):

"a. Provision of medical service in increasing proportions by organized non-profit groups with community backing and control.

"b. State regulation of the finances to assure actuarial soundness.

"c. Formulation of general standards and policies, regulation of charges, and arbitration of difficulties by the state medical and dental societies, or by an officially appointed medical board nominated in large part by the societies."

These remedial measures have at least this in their favor, that they are based on a time-hallowed therapeutic principle; the use of a hair of the dog that has bitten you as a therapeutic agent. Why assume the responsibility for a bad or a mad dog in the first place? The Committee views with great favor the practice of group medicine in which a hospital serves as its nucleus. Administrative control is to be vested in a special board, similar to the boards of voluntary hospitals, but more widely representative of the community; such boards might be the outgrowth of existing boards or might be elected by popular vote like school boards, or appointed by municipal or county officials. Financial and administrative direction of these centers is to be vested in an executive who is to be well-trained, experienced in hospital and clinic administration, with a broad social background, and a firm grasp of social as well as administrative problems. Such paragons are, as we all have reason to know, to be found in large numbers, and we should be eager and willing to entrust our souls and bodies to their keeping. The professional aspects of the service are to be under the control of the professional personnel of the center—professional personnel is a happy term which may or may not include the mere medical workers. Through an elected or appointed executive committee or chief of medical, dental, or nursing service, the professional personnel—again I call your attention to this artful choice of words—would have the right to nominate members of the staff; to nominate persons for promotion, retirement, or removal; and—*subject to approval by the board and director*—(this lay board of denominational, political, or partisan origin, or what have you?) to control all matters primarily professional. I am reminded of childhood days when I used to be allowed to hold the reins—the part which hung down from the driver's hands—and play at driving the horses. It is an eminently satisfactory arrangement from the standpoint of the three-year-old, but it would and should prove less satisfactory to the man who has held the wheel of his own car.

In speaking of the choice of a governing board by popular vote or through appointment by municipal or county officials, the Committee finds the method immaterial so long as it is free from political interference. *So long as it is free from political interference*—what further evidence do we need that the Committee is broad minded and untouched by any practical considerations? We can but marvel that anyone who has lived under our popular and unpopular form of government

can remain so untouched by a knowledge of the life that goes on about him. Let us grant that the public estimate of a physician is often unjust; that the incompetent man with a knowledge of the art of medical practice, even the quack with a personality, may be far more successful in a material way than many a man who holds high professional rank. Do you, whose eyes are not fixed upon some distant, hazy ideal, but who must perforce spend your working hours in the home, the office, and the hospital, harbor any illusions as to how fair, how just, how far-sighted promotions would be under this proposed system? How free from politics such a system would remain? How difficult the adjustment between your medical ideas and ideals and those of the so-called professional personnel of such an institution would be? And if you found yourself hemmed in and held down by theories, politics, jealousies and what not, how and where could you seek a new field of work?

The state regulation of finances and the suggestion that any deficit which might result under the voluntary or the compulsory insurance plan be met from community, from state, or from federal tax funds could mean but one thing: ultimately we should have state medicine. Leaving the professional equation out of consideration for the time being, how practicable is this plan from a financial standpoint? We as a nation have been tax-blind, but in this year of our Lord 1933, we have begun to realize that tax-blindness is a luxury which we can ill afford. The suggestion that community medical centers be controlled by boards elected as our school boards are is a pregnant one. Apropos of this subject of tax-blindness, a writer in one of our most popular periodicals this month points out that in New York State the number of pupils in her schools doubled in the years from 1890 to 1929, while her expenditures for schools increased twenty-two times; that the value of New Jersey's public school property is only $25,000,000.00 less than the value of her farms. In Iowa, we have a critical farm problem. Leaving aside the major economic problems involved, the farmers of any consolidated school district in the state will tell you that school taxes have been an important factor in their financial problems. Is it not meet that we ask ourselves whether our economic structure could bear the additional tax burden of the administration of state medicine by elective boards, or bodies, or in other words, the impersonal administration of funds to be expended for very personal needs? When we think of a pyramid, it is with its base on solid earth. Yet if we add the cost of the construction and maintenance of medical centers to the cost and maintenance of the educational system of—let us say New Jersey, shall we not have the base of the pyramid reversed?

Or suppose that we bring this problem nearer home. In 1929 in the State of Iowa, the upkeep of the county homes cost $1,323,322.21; $2,498,-185.45 was expended for the poor outside these homes, while our various state hospitals and homes brought the total expense for the year to $8,317,870.31, or more than 7 per cent of the total taxes collected for that year. Yet it was a year of prosperity—if statistics were available for this year, the figure would be a far larger one. This amount takes no account of the large and constantly growing sums invested in plant and equipment. The hospital at Iowa City alone represents an investment of five million dollars. Nor are the expenses of plant upkeep and the salaries of attending men included in this total. The Committee on the Costs of Medical Care would have such state educational institutions become community medical centers. We of the medical profession should be doubly interested in a plan which would have us as tax payers further subsidize an institution to enter into competition with the medical men whom it trains. So long as we have a medical school in Iowa City, we grant that that medical school should be supplied with all the clinical material that it can profitably use for teaching purposes, and it is logical enough to seek this teaching material among the needy who are already the wards of the state. The state-supported medical school has or should have three objectives: first, the training of physicians; second, cooperation with the physicians of the state; and third, contributions to medical knowledge. Once the teaching needs of such a school have been met, is it just, is it expedient, to spend vast sums, raised by taxation, on the erection of great buildings, on the purchase of equipment for them, on the staffing of these added hospital facilities, and then, because this additional space and equipment must be used, the added personnel necessitated by them must be put to work, to transport patients at state expense from the far corners of the state in order to fill these beds?

We as inhabitants of Polk County bear our full share of these state expenses but this does not by any means end our financial responsibility. Broadlawns Hospital alone costs us a quarter of a million dollars a year, again without taking into account the capital investment. A considerably larger sum is expended through our community chest and other extra-official charitable agencies, and the cost of all such items is distributed in one way or another only among the taxpayers of the community. We also have our full share in sup-

porting the public health activities of the Federal Government, and you may be surprised to learn that at least thirty different federal organizations, some of them with many subdivisions, already deal with various phases of the health problem. The Veterans' Bureau alone has the potential care of almost five million citizens at an eventual expense that is difficult to estimate and will be increasingly difficult to meet as it mounts with the years. It now totals almost a billion dollars a year, almost thirty per cent of the sum which the Committee says is spent on medical care each year, and some twenty-five per cent of our total national expenditures. It may not be amiss to point out here that the Committee makes the term "medical care" a most elastic one, covering not only medical care, but nursing and hospital charges, drug bills and patent medicines. We spend millions of dollars within the state, hundreds of millions of dollars under federal auspices in the construction of great centralized institutions to care in the one case for those who are unable or unwilling to pay for services within their own community, and in the other for the care of veterans. Is this method economical? Is it right? Would it not be far better to have a majority of these state and community charges—excepting only those who need care which cannot be provided save in especially equipped hospitals and the relatively small number needed for teaching purposes in hospitals connected with medical schools—cared for in local or neighboring hospitals at community expense? The community could and should pay a reasonable fee for medical services in addition to the cost of hospital care, yet even so this method would represent a saving. Would it not be far more expedient except in the exceptional case to have a veteran needing hospital care quartered in some hospital in his own territory, and there cared for by his own physician, or by a physician whom he might select from a qualified list? The veteran would be better content, the annual saving would be enormous, and the care of state and federal patients in local institutions would go far towards solving our hospital problem. Throughout the country there are many hospitals which are needed by the communities which they serve for the care of those who are willing and anxious to pay their way when ill. A majority of these institutions are facing financial disaster, are struggling to keep open during the days of limited usefulness in order that they may be there to meet the crises that arise from time to time. Caring for a considerable number of state and federal charges in these institutions would help them, and would bring some relief to the struggling taxpayer as well.

These years of mounting taxes and falling incomes have focused attention on the myriads of government employees, the locust army of the country. You and I have all due respect for the faithful government servant; at worst, we regard him as a necessary evil. But has there been anything in the disclosures of the past few years to suggest, much less to prove that government control of anything—of *anything,* I say—means efficiency and economy? Have we seen a demonstration, one single demonstration, of a project carried out under government control that could not have been accomplished more expeditiously, more economically under private enterprise? Our locust army is an army of lotus eaters as well; dreaming fair dreams in the soothing shade of the tax-bearing tree. American industry, having passed through an era of unparalleled organization and centralization has found that even under its efficient leadership, this complicated machinery is breaking down. Are we to trust the judgment of the man who must spend his own hard-earned dollars and when they are gone, face bankruptcy, or that of the man whose dollars are collected for him, and who, once they are spent, thinks that he has only to thrust his hand into the public till again? Surely there is nothing in the conduct and present state of our national affairs to recommend political domination of the practice of medicine.

I would not be understood to believe that the present status of medical practice is ideal, either from the standpoint of the general public, or that of medicine. Changes should and will come, but they should come through evolution, and not revolution. The Committee holds that we must formulate a plan for the next twenty-five or fifty years. Who can forsee what the needs of the year 1983 may be? What traffic plan, outlined in 1883, would care for the traffic of today? Desirable as foresightedness unquestionably is, it has its definite limitations. So long as we face the problems of the present and the immediate future honestly and fairly, it is not too much to assume that we are also preparing ourselves to face the problems of fifty years hence when they have become the problems of the day.

First, then, we need community, state, and federal cooperation. The burden of the medical care of the indigent should not be borne by the medical profession alone; such care should be a charge against the community and state. Iowa has done some pioneer work in developing the plan of having the poor of the county cared for by the county medical society on some contract basis. In one form or another, this plan should be developed to cover not only the care of the indi-

gent, but adequate care of those who can and should pay something, but who are unable to meet the entire cost of medical service. In isolated communities in some states, it is also true that community and state should subsidize physicians to practice medicine in certain sparsely populated areas and to care for the indigent in their territory. The state can and should cooperate in securing and assuring good medical care for its citizens, not by entering into competitive practice with its licensed physicians, but by protecting its citizens through the enactment and enforcement—a term with which our State Boards of Health and our courts are all too unfamiliar—of adequate laws regulating the practice of medicine. Why inveigh against the average efficiency of the practicing physicians so long as the state lets down the bars to -pathies and quackery? Why dream bright dreams of the control of the training of specialists when as yet we have found it impossible or inexpedient to control the basic evil of the untrained man undertaking the healing of the sick merely because some so-called school of healing has granted him the title of doctor at so much per? When we of the state of Iowa lack even so basic a bit of legislation as a pure food and drug act? Yes, the state may do much to insure better medical care of her citizens.

Federal cooperation is also needed. All the manifold departments and bureaus which now deal with phases of public health might well be centralized under a cabinet officer, a physician who has not only had wide experience in administrative matters, but who has also had some experience on the firing line. The care of veterans should be, as previously outlined, decentralized. The public health service should be developed further, but it should be a public health service, and not an attempt to take over any phase of private practice. We should have control of the patent medicine evil, an evil which costs the country not only the millions that annually find their way into the pockets of patent medicine manufacturers, but a far larger sum due to the failure of the patient to receive competent medical care in time. The control of the patent medicine evil would go far towards protecting our pharmacists from the menace of the chain store, an octopus which is threatening the very existence of the trained pharmacist.

The general practitioner has always been and must remain the backbone of our medical organization. His hands are too busy with stethoscope and bandage to reach for the end of the driving reins which the committee dangles before his eyes in the guise of coordination of the work of specialists. The general practitioner who has not only kept the faith but has kept step with medical progress as well, needs no synthetic halo or support; let the community, state, and nation play fair with him, and he will show himself amply able to hold up his end.

The final report of the Committee on the Costs of Medical Care is essentially an indictment of the medical profession. We are, according to the terms of their indictment, guilty of professional inefficiency and financial incompetency. Must we plead guilty? I point with pride to our record of centuries of service to the sick man, to the epochal achievements of the past half century, achievements which we owe not to state organization and control, not to public interest and support, but to the unextinguishable zeal, the Christ-like abnegation of the individual scientist. I must plead guilty to the charge that we of the medical profession have been financially incompetent. Union hours have not been for us; we have hearkened to the call of the sick regardless of self interest. Not for us has been the protection of patent laws and copyright; what we have discovered and invented, we have given freely to mankind without benefit of royalty. In return, we have asked not the royal income and palaces of prize fighter and movie star, but the competency that would enable us to carry on, to rear and educate our children, to insure safety and comfort if by some chance we live to enjoy old age. We still ask this—this and the right to carry on unshackled by bureaucratic control.

A STUDY OF THE INCIDENCE OF THE VARIOUS ETIOLOGIC TYPES OF HEART DISEASE IN IOWA*

(A review of 1329 cases)

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During the five-year period from 1926 to 1931, 1329 patients with heart disease were admitted to the University Hospital. These patients came from all parts of the state and it is believed that they are representative of the incidence of the various forms of advanced heart disease in Iowa. The classification as outlined and defined by the American Heart Association was followed.

On the basis of the dominant etiologic factor, it was noted that there were four main groups, arteriosclerotic, rheumatic, hyperthyroid, and syphilitic (Chart 1). A small percentage were classified in the following groups: congenital, mixed, infectious, and hypothyroid. The remainder were classified as unknown in that it was not possible to establish an etiologic factor.

*From the Department of Internal Medicine, State University of Iowa.

The four main groups comprised 92 per cent of the cases. Nearly 50 per cent of these were in the arteriosclerotic, and 27.3 per cent in the rheumatic groups. Those classified as thyroid heart disease accounted for 9.1 per cent and of these, six cases, or 0.45 per cent, had hypothyroidism. Syphilis was an etiologic factor in eighty-three

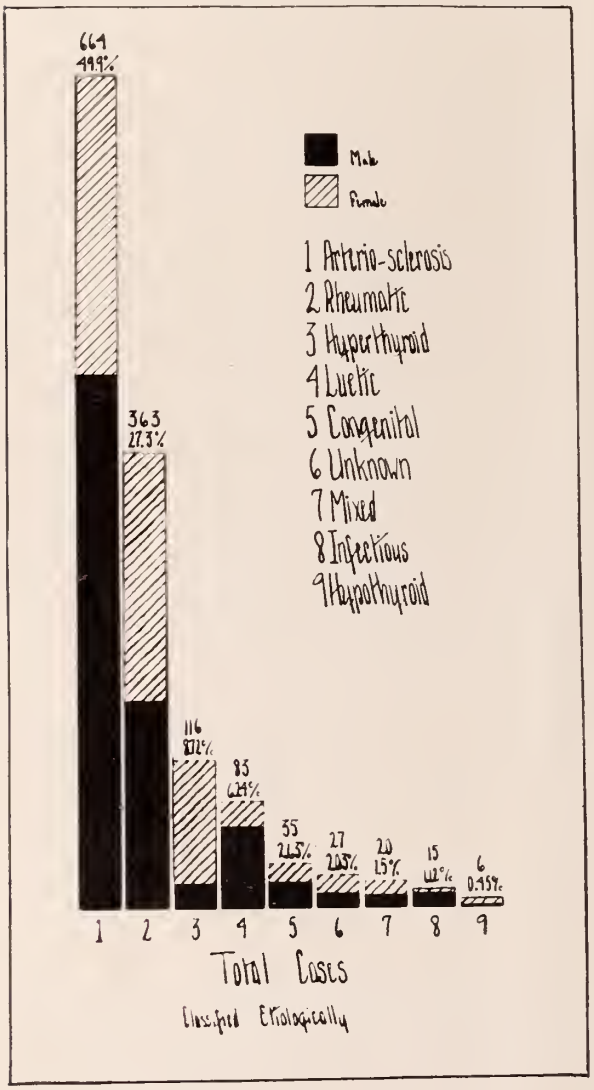


Fig. I.

cases or 6.24 per cent of the total group. The incidence of the smaller groups was as follows: congenital heart disease, 2.63 per cent; mixed, 1.5 per cent; infectious, 1.12 per cent; and unknown 2.03 per cent.

Age incidence and sex. Congenital anomalies were the only etiologic factors found in infancy. Thirteen of the thirty-five cases diagnosed as congenital heart disease were in patients under one year of age and in the majority the condition was recognized soon after birth. Rheumatic fever first became evident during childhood at the age of four. Thirty-eight patients, or 2.8 per cent of the total series, were in the first decade of life (Chart II). The highest incidence of rheumatic heart disease (111 cases, or 8.3 per cent) occurred in the second decade. It was interesting to note that four patients of the hyperthyroid group (0.3 per cent) were under thirty years of age. In the third decade arteriosclerosis and syphilis first became apparent as etiologic factors. During this period the thyrotoxic form of heart disease increased and that resulting from rheumatic fever decreased. In our series the highest incidence of thyrotoxic and syphilitic form of heart disease occurred in the fifth decade. Arteriosclerosis was an important etiologic factor after fifty years and the dominating type of heart disease thereafter.

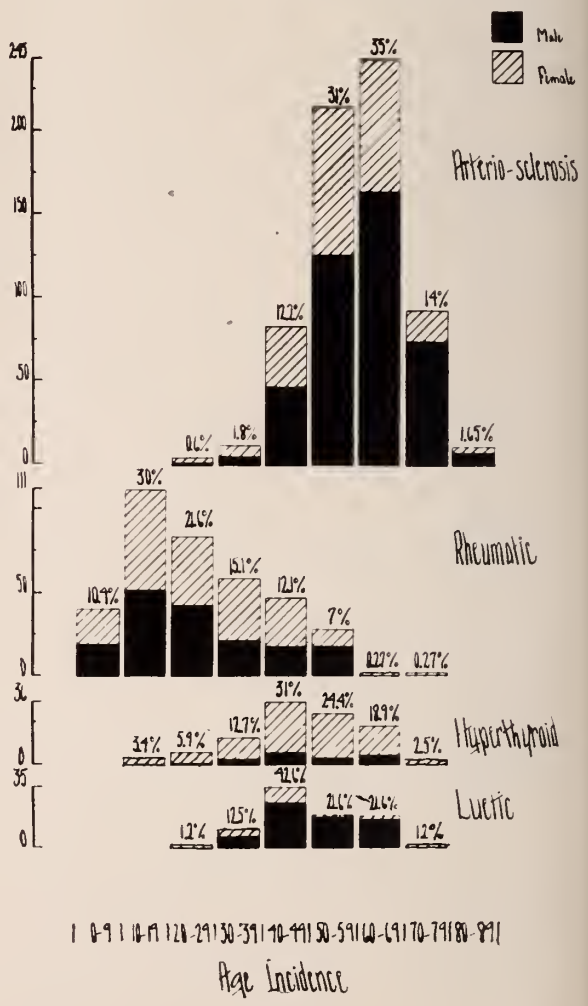


Fig. II.

In the total series the males predominated. In the arteriosclerotic group four hundred and twenty-five (64 per cent) were males and two hundred thirty-nine (35.9 per cent) were females.

In the rheumatic group females constituted 51 per cent of the total. The dominance of the female sex was most marked in the hyperthyroid group (82 per cent). In the syphilitic group there were sixty-five males, or 78.3 per cent.

Arteriosclerotic group: We have included in this classification only patients who presented definite evidence of arteriosclerosis. A majority had hypertension during the period of observation and some gave a history of elevated blood pressure in the past. Others had clinical manifestations of coronary artery disease without any significant increase in the blood pressure. The retinal vessels were examined and in a majority of the cases arteriosclerosis was found.

An attempt was made to determine the duration of symptoms. This, however, was not possible in one hundred and six cases (15.9 per cent). Many of these were patients who arrived in the hospital in coma or died shortly after admission. More than one-half of those in whom it was possible to estimate the onset of the cardiac disability had symptoms lasting three years or less and of these, two hundred and twelve, or 31.9 per cent, had symptoms lasting one year or less. Only twenty-three patients, or 3.4 per cent, gave a history of symptoms of ten years or more.

The symptoms most commonly recorded were shortness of breath either with or without exertion. This history was obtained in six hundred and eighteen cases, or 92 per cent. Orthopnea was the next most common symptom and occurred in one hundred forty-six cases, or 21 per cent. The other complaints in order of frequency were fatigue, upper abdominal discomfort, precordial pain and distress (not definitely anginal), sleep starts and true nocturnal dyspnea. Anginal pains were recorded in thirty-five cases (5.4 per cent).

Hypertension was present in four hundred and fifty-nine, or 69 per cent of the cases. This included all patients in whom the systolic blood pressure was persistently above 150 mm. and the diastolic pressure above 95 mm. of Hg. Cardiac enlargement was demonstrated in two hundred and ten, or 31 per cent of the cases. In two hundred and eighty-five, or 43 per cent, there were both cardiac enlargement and congestive failure. Hemiplegia occurred in sixty-one, or 9.1 per cent of the patients and many of these had more than one cerebral accident. Thirty-five, or 5.3 per cent, had clinical manifestations of coronary occlusion. Auricular fibrillation was present in one hundred and twelve, or 16 per cent. Gallop rhythm was noted in sixty-five, or 9.7 per cent. The size of the heart was checked by teleoroentgenograms in three hundred and eighty-five of this group. Definite cardiac enlargement was found in three hundred and seventeen patients.

One or more electrocardiograms were obtained in three hundred and forty-one cases and in many instances serial curves were taken. A left axis deviation was present in one hundred and sixty-one, or 47.2 per cent, and a right axis deviation in only twelve, or 3.5 per cent. Bundle branch block was observed in forty-three, or 12.6 per cent, while a complete block was found in only three cases. A negative T wave in Leads I and II was present in thirty-one, in Lead I in twenty-nine, in Leads II and III in nineteen and in all leads in twenty-nine cases.

Ninety-six, or 14.4 per cent of the six hundred and sixty-four patients in this group died in the hospital and fifty-four of these came to necropsy. Thirty-six or 66.6 per cent had symptoms of three years' duration or less. In thirty-five, or 64.8 per cent, there was a history of more than one attack of congestive failure. The clinical findings in this group are indicated in Chart III. In fifty-three, or 98.1 per cent, a clinical diagnosis of a cardiac hypertrophy was made and in fifty of these, or 92.5 per cent, a definite hypertrophy was found at autopsy (Chart IV). In only eight cases

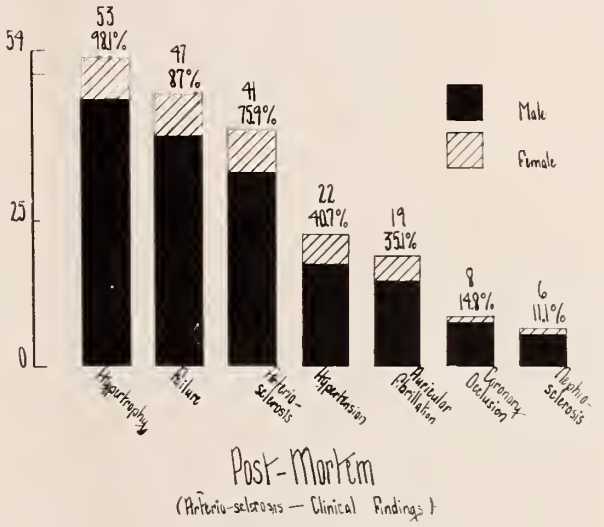


Fig. III.

(14.8 per cent) a diagnosis of coronary occlusion was made before necropsy while at postmortem thirteen, or 24 per cent, were found to have an occlusion of one or more vessels. Thirty-six, or 66.6 per cent, had definite sclerosis of the coronary vessels and in all but one of this group there was a well defined general arteriosclerosis. In thirty-seven, or 68.5 per cent, there was arteriosclerosis of the kidney, and nine, or 16.6 per cent showed well advanced changes in the pulmonary arteries.

Rheumatic group: In this series of cases 363 were classified as rheumatic heart disease. A history of some manifestations of rheumatic fever was obtained in 305 cases. The remaining 58 patients in this group, although definitely rheumatic, are not included in the subsequent analysis as their clinical records were incomplete. Of

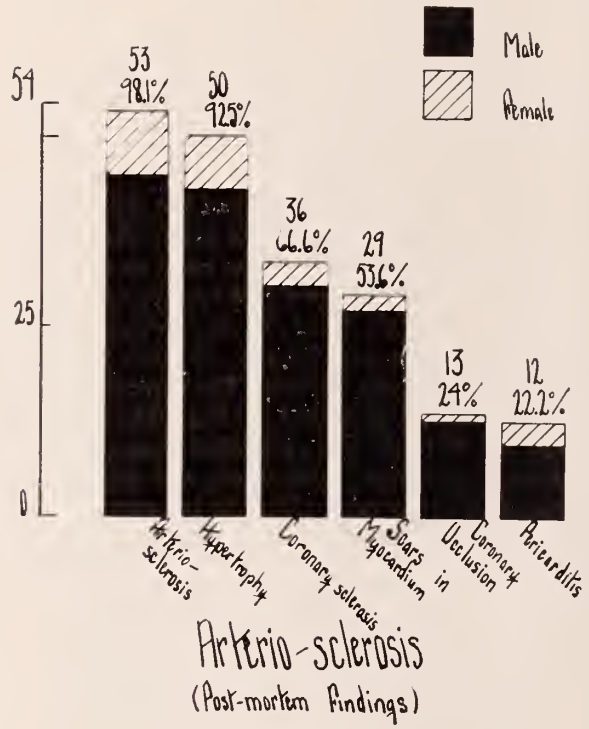


Fig. IV.

the three hundred and five cases, two hundred and forty-five (80.3 per cent) gave a history of acute rheumatic fever; forty (13.1 per cent) both rheumatic fever and chorea, and twenty (6.6 per cent) chorea alone (Chart V). Approximately 50 per cent had experienced two or more attacks of rheumatic fever and one hundred and thirty-four (43.9 per cent) had had recurring attacks of tonsillitis. In thirty-two (10.4 per cent) there was a history of tonsillectomy prior to the onset of the rheumatic infection. Upon admission to the hospital one hundred and three (30.4 per cent) had acute rheumatic fever; twenty-seven (8.8 per cent) had chorea; twenty-five (8.1 per cent) had pericarditis with or without effusion and twenty-two (7.1 per cent) subacute bacterial endocarditis. Congestive failure was present in one hundred and fifteen (37.7 per cent) and auricular fibrillation in forty-four (14.4 per cent). It is of interest to note that the incidence of auricular fibrillation was practically the same as in the arteriosclerotic group. Embolic manifestations occurred in twenty-four (7.8 per cent) and an elevated blood pressure was recorded in twenty-two (7.2 per cent). The mitral valve was most frequently involved and a diagnosis of mitral stenosis was made in one hundred and sixty-five, or 54 per cent. An aortic insufficiency was noted in eighty-five (27.8 per cent). Mitral stenosis occurred as the dominant lesion in nineteen (6.2 per cent) and aortic stenosis in three (0.98 per cent). It is striking that a mitral insufficiency without evidence of a stenosis was observed in only twelve patients, or 3.9 per cent.

Forty-seven (15.4 per cent of the three hundred and sixty-three cases classified as rheumatic heart disease) died while in the hospital and nineteen of these came to necropsy. Ten (52.6 per cent) gave a history of rheumatic fever; seven (36.8 per cent) recurring tonsillitis, and three (15.8 per cent) chorea. The ante mortem clinical records show that sixteen (84.2 per cent) had congestive fail-

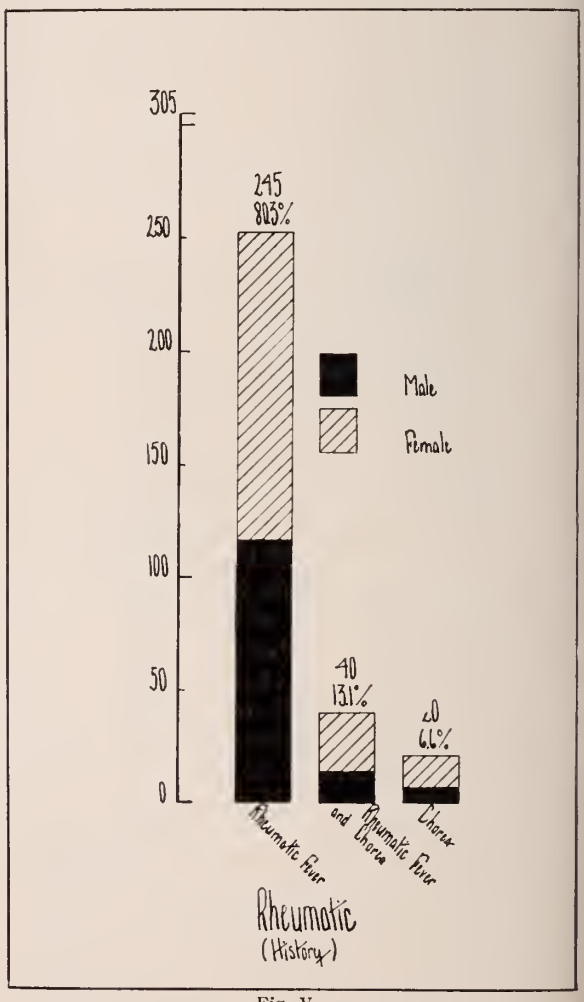


Fig. V.

ure. The clinical and pathologic findings relative to the valvular involvement are shown in Chart VI. An ante mortem diagnosis of mitral valve

disease was made in seventeen cases, whereas at necropsy the valve was found to be involved in eighteen or 94.7 per cent. Aortic valve disease was noted in six at necropsy, but the records indicated that the lesion was recognized in only three before death. Pericarditis was present in nine, or 47.4 per cent, of the nineteen cases.

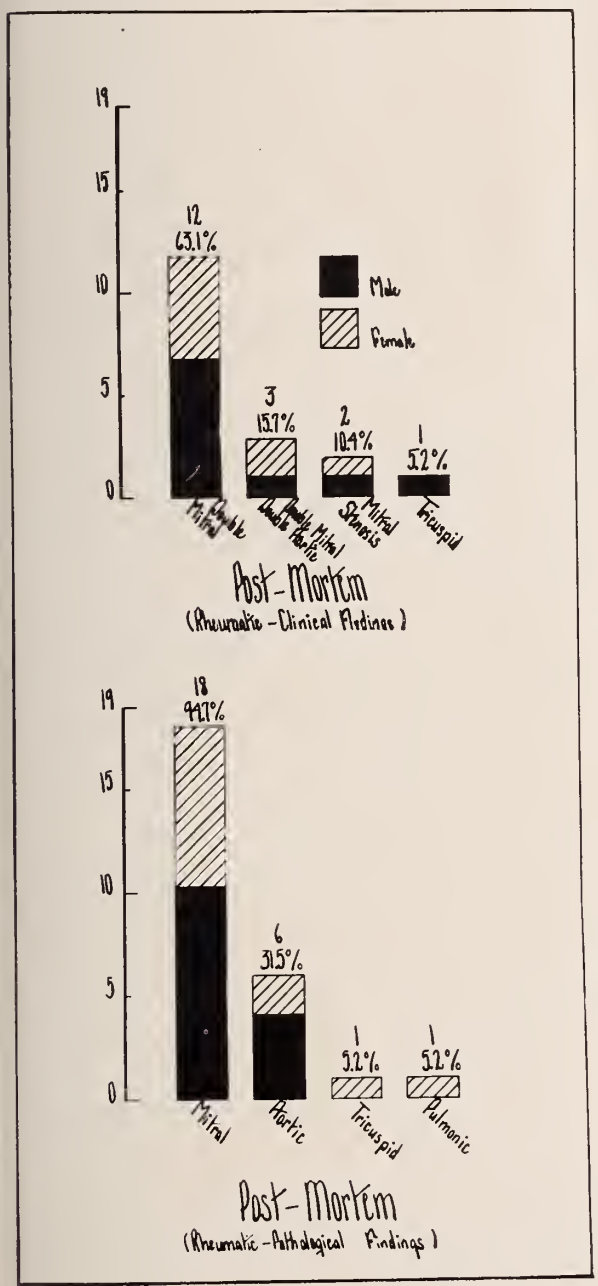


Fig. VI.

The diagnosis of subacute bacterial endocarditis was made in twenty-two cases. Sixteen of these patients died in the hospital and ten came to necropsy. Eight were between twenty and thirty and two between fifty-six and fifty-nine years respectively. Seven gave a history of rheumatic fever and two had congestive heart failure. A positive blood culture was obtained in seven. In five the streptococcus viridans was isolated and in two a streptococcus non-hemolyticus. Eight cases showed embolic phenomena. At necropsy all presented embolic manifestations. The valves involved were as follows: the mitral in eight, aortic in five, tricuspid in two and pulmonary in two. In four a mural endocarditis was discovered. Four had a pericarditis with effusion.

Thyroid group: A diagnosis of thyrotoxic heart disease was made in one hundred and sixteen cases. There were also six in which a cardiac disability was associated with hypothyroidism. Three of the latter had congestive failure. In two the heart became smaller following the administration of thyroid substance. In the thyrotoxic group thirty-six, or 30.9 per cent, of the one hundred

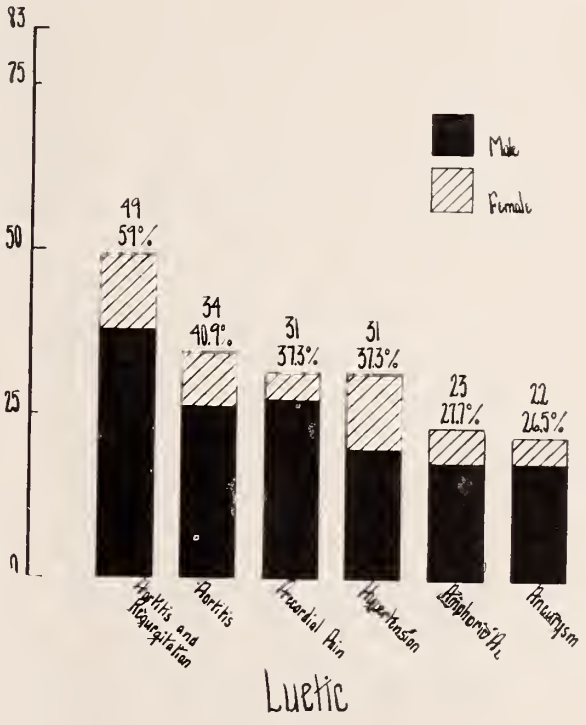


Fig. VII.

and sixteen cases had congestive failure; eight, or 6.8 per cent, died; sixty-seven, or 57.6 per cent, presented cardiac enlargement; forty-six, or 38.5 per cent, both cardiac enlargement and auricular fibrillation, and three, or 2.16 per cent, auricular fibrillation without other demonstrable evidence of structural changes in the heart. Three of the eight patients who died came to necropsy. Each showed cardiac enlargement, congestive

failure and nodular changes in the thyroid gland.

Syphilitic group: In this group a positive blood Wassermann was obtained in seventy-one, or 85 per cent of the cases. The heart was enlarged in fifty-nine, or 71 per cent, and cardiac failure was present in twenty-seven, or 32 per cent. The aortitis was accompanied by an aortic insufficiency in forty-nine, or 59 per cent (Chart VII). In thirty-four, or 40.9 per cent, an aortic insufficiency was not demonstrated. Of the latter group, aneurysm was a part of the clinical picture in twenty-two, or 26.5 per cent. Hypertension was frequently present, particularly in the group with aortic insufficiency. An amphoric aortic second sound was noted in twenty-three, or 27.7 per cent. Shortness of breath was the dominant symptom in the majority and present to a varying degree in practically every case. Thirty-one patients, or 37.3 per cent, complained of severe precordial pain.

It will be noted that there were only twenty-nine negroes in this entire series. The cardiac disability, however, was further advanced in this race. A far greater percentage showed an extensive enlargement of the heart and marked failure. The incidence of aneurysm was also higher (Chart VIII). Seven deaths occurred in this group and all came to necropsy. The ages ranged from thirty-three to fifty-six years. Four showed

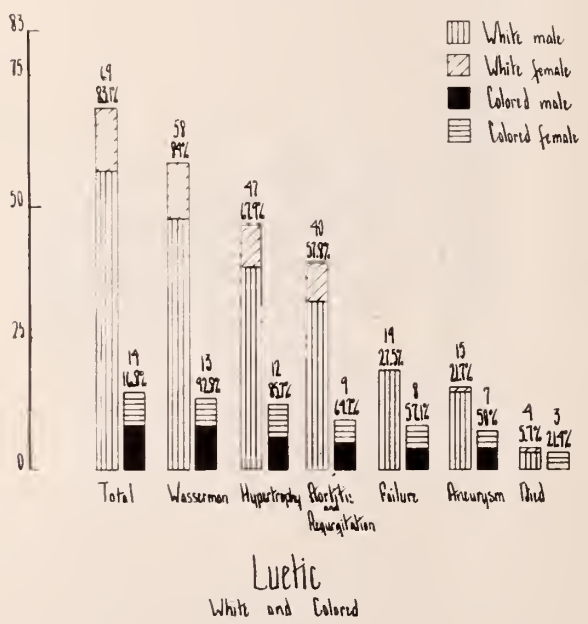


Fig. VIII.

marked cardiac hypertrophy and dilatation, and two presented aneurysm of the aortic arch. In one, death resulted from hemorrhage from a large duodenal ulcer.

Congenital group: Thirty-five patients, or 2.6 per cent, were classified in this group. Eleven, or 31.4 per cent, had associated congenital defects in other parts of the body. Nine died while in the hospital and an autopsy was obtained in six. The ages varied from two weeks to five months. Each presented multiple cardiac anomalies. Four had patent interventricular septa; two, patent ductus arteriosus; one, an aortic stenosis; and in one the aorta arose from the right side of the heart. Five of the six patients had congenital defects in other organs.

Infectious group: This comprises a small group in which various types of infections were responsible for the cardiac damage. The history in each instance was negative for rheumatic fever. In five of these patients the cardiac infection was attributed to an infection resulting from trauma or abortion. It was not possible to elicit the portal of entry of the infectious agent in the remaining ten. The attention was usually directed to the heart because of the appearance of a murmur or the development of pericarditis. Nine of this group died and six of them came to necropsy. Four showed an acute endocarditis and pericarditis. Four presented septic infarcts involving particularly the lungs. In one case a coronary occlusion from a septic embolus was discovered. Another showed a mycotic aneurysm of the mitral valve.

Mixed group: Twenty patients were classified in this group because the dominant etiologic factor could not be determined. Seven of this group had demonstrable arteriosclerosis and gave a history of rheumatic fever. Six had arteriosclerosis and luetic heart disease; three, arteriosclerosis and hypothyroidism; two, arteriosclerosis and hyperthyroidism; and two, rheumatic heart disease and hyperthyroidism. Twelve, (60 per cent) showed congestive failure; nine (45 per cent) auricular fibrillation, and seven (35 per cent) hypertension. In two a bundle branch block was demonstrated by the electrocardiogram. Four (20 per cent) of this group died but none came to necropsy.

Unknown group: This comprised twenty-seven cases in which it was not possible to determine the etiology. All had rather extensive structural changes in the heart and eighteen showed congestive failure. The other important clinical findings were as follows: seven had hypertension; five, auricular fibrillation; one, auricular flutter and one, bundle branch block.

The accompanying table presents the results of statistical studies on heart disease in various sections of the United States including those of the present series. The incidence of rheumatic heart

disease in Iowa is similar to that in the New England states, whereas that of the New York and Rocky Mountain groups is approximately twice as high. The incidence in the Texas series, on the other hand, is very low. This is in accord with the general impression that climatic conditions have marked influence on the occurrence of rheumatic fever. It is rather difficult to correlate our results relative to the incidence of arteriosclerotic heart disease with those obtained by other workers since, with one exception, they have separated hypertensive heart disease and angina pectoris from arteriosclerosis. We, however, feel that the majority of instances of angina pectoris and hypertension are associated with arteriosclerosis and following the criteria of the American Heart Association have placed them all in that group. On this basis the highest incidence occurred in Virginia and Texas. This might possibly be attributed to the large negro population in those states. According to Schwab and Schulze,[6] the cardiovascular system of the southern negro is inferior to that of the white race. The relatively high incidence of thyrotoxic heart disease in the Rocky Mountain series and in the present series is probably in accord with the relative frequency of thyroid disorders in these respective regions. The variation in incidence in the remaining groups was not remarkable.

3. A diagnosis of rheumatic heart disease was made in 363 cases (27.3 per cent). This constituted the major cause for the cardiac disability before the age of forty.

4. Thyrotoxicosis was a factor in the cardiac disease in 116 cases (8.72 per cent). In six the cardiac disability was associated with hypothyroidism. Three of the latter had congestive failure and in two the heart became smaller following the administration of thyroid substance.

5. In 83 cases (6.24 per cent) the diagnosis of syphilitic heart disease was made. In this group a positive blood Wassermann was obtained in 85 per cent of the cases.

6. The remaining cases were classified into four groups, namely, congenital, infectious, mixed and unknown. The congenital group consisted of 35 cases (2.63 per cent). These patients were all under one year of age and in a majority of instances the condition was recognized soon after birth. Those classified as infectious comprised a small group in which various types of infections were presumably responsible for the cardiac damage. The history in each instance was negative for rheumatic fever. Twenty cases were allocated to the mixed group because there was more than one possible etiologic factor. It was not possible to determine the etiologic factor in the remaining 27 cases and these were placed in the unknown group.

	Virginia [1]	New York [2]	New England [3]	Rocky Mountain [4]	Texas [5]	Iowa
Number of cases	300	1000	2,421	867	1,660	1,329
Arteriosclerotic	32.4%	22.3%	26.3%	21.1%	20.2%	49.9%
Hypertensive	32.6	------	21.7	14.9	57.2	------
Angina Pectoris	6.6	------	10.9	------	------	------
Total	71.6	22.3	58.9	36.0	77.4	49.9
Rheumatic	15.6	42.7	29.3	44.0	3.4	27.3
Thyroid	2.6	------	2.1	9.3	2.5	9.17
Luetic	7.8	8.6	2.7	1.1	12.7	6.24
Congenital	0.7	------	1.1	1.1	0.7	2.63
Unknown	1.6	17.8	2.2	7.3	2.3	2.03
Subacute	------	------	1.4	0.2	0.3	1.6

SUMMARY

1. This report is based on a statistical study of 1329 cases of organic heart disease admitted to the University Hospital during the five-year period from 1926 to 1931.

2. Arteriosclerosis was the most common etiologic factor and was responsible for the cardiac disability in 664 cases, or 49.9 per cent. This was, by far, the most common disability after the age of forty.

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SOME DATA ON UTERINE CANCER*

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This study covered a period of ten years, and as indicated in Table I, included 219 consecutive patients with cancer of the female generative organs. No attempt has been made to establish clinical groups, except as shown in Tables III and X, nor to consider pathologic grading of the cancers according to microscopic findings. Complete analysis was not always possible but such information as was obtained is presented for its own value and as a possible basis for comparative studies in the future.

REGION INVOLVED	NUMBER	PER CENT
CERVIX	167	76
FUNDUS	24	11
OVARY	16	7.5
VULVA	8	4
VAGINA	3	1
TUBE	1	.5
TOTAL	219	100 00

Table I.

CANCER OF CERVIX

	NUMBER	PERCENT	
NULLIPARA	22	13 5	
MULTIPARA	141	86.5	
AVG NO CHILDREN	4		PARITY NOT STATED IN FOUR CASES

Table II.

Because of the small number of reports available only data obtained from patients with cancer of the cervix and corpus uteri will be analyzed.

As indicated in Table II, 22, or 13.5 per cent of the patients were nulliparas, and 141, or 86.5 per cent were multiparas, while in four cases the parity was not stated. This represents the usual relationship between carcinoma of the cervix and childbearing. The average number of children in the parous group was four. The 141 parous women with cervical cancer were drawn from many thousands of parous women seen in the University Hospital. It would have been of interest to know what a similar number of nulliparous patients would have revealed.

*From the Department of Obstetrics and Gynecology, University of Iowa, Iowa City, Iowa. 1928-1929.

Extent of Disease: As indicated in Table III, only 18 per cent of cervical cancers were considered operable at the time of admission. It is admitted that the term operable is open to much just criticism and should not be used, but the character of the older records was such as to necescitate its use as meaning that the patient was actually submitted to operation or was classified as operable by the examiner. A statement of actual findings, such as the presence of parametrial involvement, is preferable but is likewise not entirely satisfactory, since in border-line cases, honest opinions may differ as to the presence of parametrial extension. The pertinent point is, as shown in Table III, the high percentage of well-advanced cases.

CANCER OF CERVIX

	NUMBER	PERCENT
OPERABLE	30	18
INOPERABLE	137	82

Table III.

Early Symptoms: Nearly all the patients first sought medical advice because of abnormal menstruation or of intermenstrual bleeding. "Spotting," the most common and only consistent early symptom, was characterized by the fact that it was (1) progressive, (2) prone to follow trauma, (3) intermenstrual in character. This accords with the findings of others and supports the belief that slight, abnormal bleeding is the earliest and most significant symptom in cancer of the cervix.

Number Diagnosed Before Admission: In view of the fact that spotting has long been recognized as a significant symptom, it was noted how often a definite diagnosis was made at the time of the first consultation for this symptom. Table IV shows that among 126 cases with sufficient data only 56 per cent were diagnosed correctly, while four patients had not even been examined before admission. Since the disease was usually well advanced before medical advice was sought, the fact that only 56 per cent were correctly diagnosed is not a commendable showing.

CANCER OF CERVIX

	NUMBER	PERCENT
DEF. DIAG.	71	56
NOT DIAG.	55	44
NOT EXAM.	4	
HIST. INDEF.	41	

Table IV.

Diagnostic dilatation and curettage is entirely justifiable, indeed imperative, when any doubt exists as to the presence of cancer. Patients of

menopausal age who complain of spotting are too often cancerous to justify any other course. Better an unnecessary curettage or cervical biopsy than an overlooked early cancer. Biopsy can frequently be performed in the office, the Gaylor forceps being especially helpful. More commonly, hospitalization for a few days and performance of the operation under gas anesthesia is preferable, since it permits thorough examination and makes it possible to obtain sufficient tissue for accurate microscopic study. This is the only method whereby a positive diagnosis can be made early in the disease.

That only four patients in this series were not examined may not be considered significant, yet it indicates a deplorable tendency. Patients consulting physicians because of abnormal bleeding are too frequently supplied with ergot or some other oxytocic drug, and told to return later for examination. This procedure is continued until finally when the patient does not improve, an examination is made, or the patient, becoming dissatisfied with this type of treatment, consults someone else. As a consequence, much valuable time is wasted. No patient with menorrhagia or metrorrhagia should ever be permitted to go for any length of time without careful examination of the pelvic organs. These patients do not seek a physician's advice unless disturbed over their symptoms, and it is never wise or safe to postpone the examination.

CANCER OF CERVIX

FIRST SYMPTOM AFTER MENOPAUSE

	NUMBER	PER CENT
NO. WITH DEFINITE HISTORY	64	
NO. WITH INDEFINITE HIST.	29	
TOTAL	93	56
NUMBER DIAGNOSED	41	64
NUMBER NOT DIAG.	23	36
NUMBER NOT EXAM	1	2

Table V.

Onset After Menopause: Spotting after the menopause is even more significant. Certainly its appearance at this time should arouse the curiosity and suspicion of even the most phlegmatic physician. Yet, among the 64 cases of post-menopausal carcinoma of the cervix, only 41, or 64 per cent were diagnosed when first seen. (Table V.) One patient was not examined.

Time Wasted: Table VI shows the amount of time wasted between the appearance of symptoms (spotting) and the first treatment in cervical cancers. The average was one year, of which six months may be attributed to the patient's failure to seek medical advice, while the remaining half

CANCER OF THE CERVIX

	DAYS	WEEKS	MONTHS	TIME WASTED
Average Time Interval from First Symptom to First Examination	175	25	6.2	6.2 MONTHS
Average Time Interval from First Examination to First Treatment	168	24	6	6 MONTHS
AVG. TOTAL TIME WASTED 1 YEAR				

Table VI.

year was largely the physician's responsibility. Doubtless, this latter delay was due chiefly to failure to recognize the condition, although in other instances cancer must have been suspected or even diagnosed, and the physician's fault lay in failing to impress the patient with the urgent need for immediate treatment. That the responsibility for this enormous waste of time subsequent to examination may be attributed to a small group of physicians is indicated by the report of the Cancer Commission of the Pennsylvania State Medical Society some years ago, which showed that 10 per cent of physicians, usually those who fail to attend medical meetings and who seldom read medical journals, were responsible for most of this wasted time. The majority of physicians, on the other hand, make every effort to recognize cancer and are alert for signs or symptoms suggesting its presence.

Physicians speaking before lay groups on genital cancer sometimes feel inclined to elaborate on the symptomatology, when a concise statement concerning spotting and its three characteristics, (1) intermenstrual, (2) progressive, and (3) prone to follow trauma, would help accomplish far more by its simplicity. It should also be emphasized that an abnormal discharge of any character occuring unexpectedly or persisting unduly long calls for a thorough examination.

Regardless of final responsibility, the fact re-

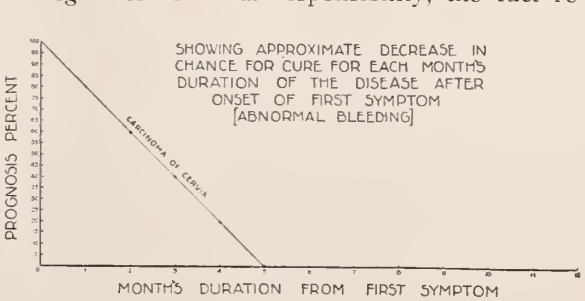


Table VII.

mains that in this group of cervical cancers the average total time wasted between the onset of symptoms and the first treatment was the almost unbelievable total of one year. To appreciate properly the significance of this delay it is necessary to observe its effect upon prognosis.

Chances For Cure: Table VII shows the *approximate* decrease in the chance for cure for each month's delay in securing effective treatment after the appearance of "spotting," as based upon the presence or absence of parametrial invasion. The probability of such involvement increases at the rate of about 20 per cent per month after the onset of the first symptom, or about 5 per cent per week, so that, at the end of about five months, the average patient with carcinoma of the cervix showed parametrial involvement. If Table VII is considered in connection with the evidence presented in Table VI, we find ample explanation for the existing unsatisfactory results from all therapeutic methods. Only when effective treatment is instituted early may we hope to obtain satisfactory results.

Chances For Early Diagnosis: In view of the effort being made by many public and private agencies to encourage early medical consultation, an attempt was made to determine the chance for positive diagnosis should the patient consult her physician early in the disease. (See Table VIII.) Obviously, the number of cases is far too small

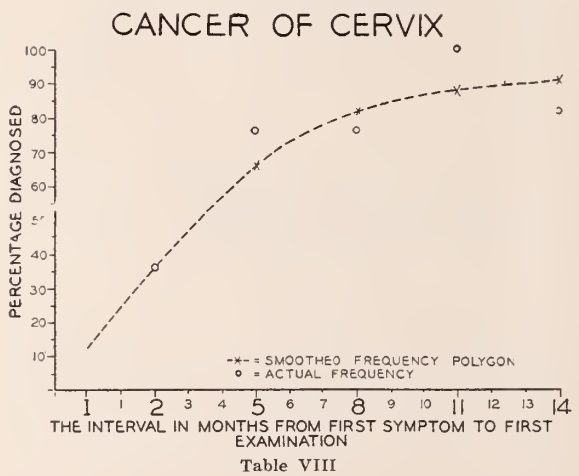


Table VIII

to permit conclusions, but the evidence obtained seems significant. Among the patients who consulted their physicians within two months after the onset of symptoms, only 36 per cent were diagnosed correctly, while at the end of the fifth month, usually after parametrial extension, (See Table VII) 76 per cent received a correct interpretation of the physical findings. The probability of an early correct diagnosis would be increased if the importance of spotting and abnormal discharge could be sufficiently impressed upon patients as well as physicians. In the presence of spotting or abnormal discharge, the responsibility is so great that no physician should say that the patient does not have carcinoma until he is himself thoroughly convinced. Sometimes this necessitates a diagnostic biopsy and curettage but better an unnecessary biopsy than a missed early cancer.

CANCER OF BODY OF UTERUS

	NUMBER	PER CENT
NULLIPARA	3	13
MULTIPARA	19	87
AVG. NO. CHILD.	3	
PARITY NOT STATED IN TWO CASES		

Table IX.

There were 24 cases of cancer of the body of the uterus, all of the glandular type. Three, or 13 per cent, occurred in nulliparas, while 19, or 87 per cent, were found in parous women. The average number of children per patient was three. This observation differs from the general conception regarding the relationship of body cancer to childbearing, for it is commonly believed that carcinoma of the body of the uterus is more frequent in women who have not borne children.

CANCER OF BODY OF UTERUS

	NUMBER	PER CENT
OPERABLE	17	71
INOPER.	7	29

Table X.

Incidence of Operable Cases: Most of the body cancers (71 per cent) were operable when admitted for treatment. Carcinoma of the body is usually slow-growing, remains localized in the uterus for some time, and metastasizes late.

CANCER OF BODY OF UTERUS

	NUMBER	PERCENT
DIAGNOSED	10	55
NOT DIAG.	8	45
NOT EXAM.	2	
HIST. INDEF.	4	

Table XI.

Diagnosis of Body Cancer: When it is realized that body cancer is not readily diagnosed by bimanual examination alone, 55 per cent of correct diagnoses before admission shows that the physicians were giving heed to the history, to pelvic findings, and to such other evidence as was available. How many diagnoses were made by curettage and microscopic examination of the tissues is unknown, but frequent use of this diagnostic procedure might explain the rather favorable situation.

Onset After Menopause: Twelve patients developed their first symptoms after the menopause,

CANCER OF BODY OF UTERUS

FIRST SYMPTOM APPEARED AFTER MENOPAUSE			
	NUMBER	PER CENT	
NUMBER WITH COMPLETE HISTORY	12		
DIAGNOSED	6	50	
NOT DIAG.	6	50	
NOT EXAM.	2	17	

Table XII.

with six, or 50 per cent, being diagnosed correctly when first seen. Two patients, not examined, were included in the undiagnosed group. No physician can invariably make a diagnosis of body cancer by pelvic examination alone. His suspicions should be aroused, however, and he may justly be criticized for not advising diagnostic dilatation and curettage to eliminate malignancy. Failure to examine patients with abnormal bleeding or discharge appearing after menopause is to be severely condemned.

CANCER OF BODY OF UTERUS

	DAYS	WEEKS	MONTHS	TIME WASTED
Average Time Interval from First Symptom to First Exam.	448	64	16	16 MONTHS
Average Time Interval from First Exam. to First Treatment	266	38	9.5	9.5 MONTHS
AVG. TOTAL TIME WASTED OVER 2 YEARS				

Table XIII.

Time Wasted: The total time wasted before treatment was instituted amounted to over two years. The loss of time from the first symptom to the first examination was about 16 months, (Table XIII), while the time wasted from the first examination to the first treatment was 9½ months. Since a few of the patients did not report for some years after the onset of symptoms, the data obtained from this small group cannot be given too much significance. Even so, such a waste of time seems almost incomprehensible.

The probability of extension beyond the uterus and consequently the decrease in chance for recovery was at the rate of about 9 per cent per month. (See Table XIV). Extension beyond the uterus occurred after an average period of eleven months from the appearance of the first symptom.

The factors responsible for the delay and the consequent decrease in possibility of cure have been discussed under carcinoma of the cervix and need not be repeated here.

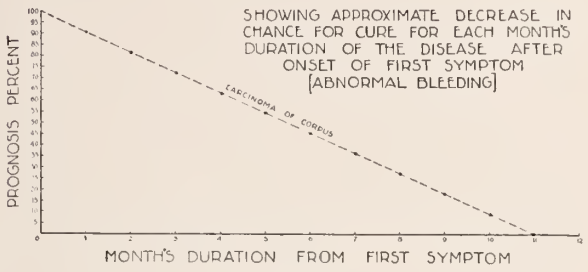


Table XIV.

SUMMARY

1. The most significant early symptom of uterine cancer is abnormal discharge. Usually this appears as bleeding or "spotting," but may take the form of an abnormal leukorrheal discharge. The "spotting" is (1) *intermenstrual,* (2) *progressive,* and (3) *prone to follow trauma.* Spotting is far more significant as a symptom of cervical cancer than is leukorrhea. The sudden appearance of leukorrhea in older women or its sudden change in character is also highly significant.

2. The real need for a *definite diagnosis* in all patients with suspicious symptoms must be emphasized again and again. The possibility of cancer should be ruled out in every patient presenting suspicious symptoms even to the point of doing a biopsy with microscopic examination of the tissues, if necessary.

3. Physicians who speak on cancer of the female generative organs should avoid discussion of late symptoms, which may lead the patient astray and defeat the purpose of the talk. The *early symptoms may* be ignored and the patient may wait for further evidence before having her innermost fears confirmed or refuted. Emphasis should be placed on spotting and abnormal discharge.

4. The waste of time both before and after seeking medical advice represents a combined responsibility. The danger of such delay is very real.

5. The need for more extensive use of the surer methods of diagnosis is stressed by the high percentage of inaccurate diagnoses before admission.

In spite of the data presented, criticism of the average physician is probably unjust, for, as pointed out by The Cancer Commission of the State Medical Society of Pennsylvania, most of the delay and failure of diagnosis is to be attributed to the relatively small percentage of incompetent practicing physicians.

LATERAL SINUS THROMBOSIS COMPLICATING MASTOIDITIS*

RALPH H. PARKER, M.D., Des Moines

Infection of the lateral sinus, as a complication of mastoiditis, occurs in about 5 per cent of cases. It is found in children more often than in adults, the ratio being three to one. It takes place more often in males than in females, the ratio being two to one. Sixty per cent of cases occur on the right side, probably because the greater part of the return flow of blood from the brain cavity comes through the right jugular vein.

When thrombosis occurs the death rate is high. Before 1880, when Zoufal published a paper, describing for the first time, the treatment of evacuating the sinus and tying off the jugular vein, the death rate in sinus thrombosis was 30 per cent. Boies[1], in a study of 184 cases of lateral sinus thrombosis treated in the Massachusetts Eye and Ear Infirmary between 1915 and 1930, reports a mortality of 25 per cent. Potts[2], in a series of 63 cases, reports a mortality of 14 per cent. I think the mortality in our private practice will be much less than that given by these authorities, as we see the patients early and their physical condition is much better than that of a group selected from the large charity hospitals.

Cases of sinus infection do not have a definite pathology. They do not have a definite group of symptoms, nor do we have a definite plan of treatment that will apply to each individual case. In our analysis of the case, we have to consider the virulence of the strain of invading bacteria, and whether they have the specificity[3] for sinus tissue which some strains seem to have; we must consider the amount of toxin and bacteria entering the blood stream, whether it is thrown in early in the infection or later, after nature has had an opportunity to build up a certain amount of immunity to the invader; we must consider whether the toxin and bacteria enter the blood stream gradually or suddenly, in large or small amounts; and then much will depend on the natural protective resistance of the host.

While infection of the lateral sinuses is primarily a condition to be treated surgically, many patients recover without surgical aid. Crane[4] reports seven cases of otitic sepsis, two of which gave histories and findings of sinus thrombosis and positive blood cultures of hemolytic streptococci, in which operation on the sinus and jugular vein was not done and the patients recovered. Lynch[5] reports twenty-five collected cases of cured sinus thrombosis without surgery of any kind. In 1919, I prepared a paper for the Polk County Medical Society on "Lateral Sinus Infection Complicating Mastoiditis," in which I reported five consecutive cases giving clinical histories of sinus infection which recovered without surgical treatment.* This was a most unusual group of cases and it would have been a very unfortunate conclusion had I assumed that all future patients would recover with only medical treatment.

I wish to report and discuss clinically two cases of lateral sinus thrombosis.

Case 1. A farmer, aged fifty years, was admitted to Mercy Hospital June 9, 1930. He gave the following history: Two weeks prior to entering the hospital, his dentist had extracted a second upper right bicuspid tooth. The tooth socket was curetted and the antrum entered. He was treated by the dentist for an infected antrum for two weeks following the extraction. On June 7, I washed out the antrum through an opening made in the lower meatus, removing a large amount of foul-smelling pus. As the opening made with the rasp continued to bleed during the day, I packed the right lower meatus with gauze and he returned home. During the night, he was seized with a severe earache and returned to the office the following morning, when a paracentesis of the right ear drum was made. The ear drained quite freely. He was then sent to the hospital. The antrum was irrigated daily for ten days, during which time the right ear continued to drain a large amount of serosanguineous fluid. The flow was so free that "drip" would describe it better than "drain".

During the first ten days in the hospital, he did not appear ill. There was some tenderness over the right mastoid. The temperature was low and the leukocyte count was not high. On the eleventh day, he had a chill with an elevation of temperature to 103 degrees. The thirteenth and fourteenth days, the temperature was 103, with marked mastoid tenderness. The report of the x-ray examination was "marked increased density of the mastoid cells. The walls between the upper and lower portions are apparently broken down." A complete simple mastoid operation was made. The antrum and cells contained pus. The cell walls were broken down. The bony covering of the sinus was cleared and appeared healthy. A rubber tube drain was used and the wound closed.

For ten days following the operation, the patient had daily chills, remissions and sweating, a right-sided headache, mastoid drainage, leukocytosis, negative blood cultures and negative urine. He did not appear sick except when he had a chill, and was feeling so well that he wished to return home. On the eleventh day following the mastoid operation, the blood gave a positive culture of streptococci. The mastoid wound was reopened and the bony covering of the sigmoid sinus removed. A perisinuous abscess

* Presented before the Eighty-first Annual Session, Iowa State Medical Society, Section on Ophthalmology, Otology and Rhinolaryngology, Sioux City, May 4, 5 and 6, 1932.

* Two of the cases were seen by consultants and a diagnosis of sinus thrombosis was made. An operation on the sinus was advised but refused.

was in contact with the wall of the sinus. A dense clot in the sinus extended from the bulb to the torcular. The sinus did not pulsate. The sigmoid portion of the sinus was of a dirty gray color and soft in consistency. The clot was disintegrated and when the sinus was opened, drained pus. Above the sigmoid, the sinus was dark in color and the clot was dark and hard. The same conditions existed below the sigmoid. The bony covering of the sinus was removed from the bulb to within one inch of the torcular. With a ring curette, the clot was cleared to the torcular when bleeding was established. The sigmoid was cleared to the bulb and bleeding was not established. The walls of the sinus were trimmed off and the upper end of the sinus packed with gauze. A gauze drain was inserted in the lower end of the wound and the mastoid wound was filled with gauze, but no stitches were used. The internal jugular vein was double-tied above the facial and severed between the ligatures. The neck wound was closed and a gauze drain used. The fever returned to normal the day following the operation and remained so until he was dismissed from the hospital, ten days later. He has been well since, but draws $150.00 per month compensation from an insurance policy because he becomes dizzy when attempting any heavy work.

TEMPERATURE CHART

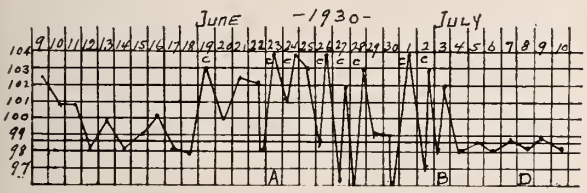


Fig. I.

A. Mastoid operation.
B. Sinus operation. Ligature of jugular. Positive blood culture.
C. Chills.
D. Discharged.

This patient, to my mind, represents the coalescent type of mastoiditis. The mastoid cells were broken down and the mastoid cavity was filled with pus. The white blood count was never more than 16,000. There was a delayed invasion of the blood stream beyond ten days after the mastoid infection and nature had abundant time to build up a resistance. There was an organized clot extending from the jugular bulb to the torcular, through which the streptococci had difficulty in reaching the blood stream. The infection reached the lateral sinus through the sinus wall, due to its contact with the pus in the perisinuous abscess. The abscess exerted enough pressure upon the yielding wall of the sinus to narrow its lumen and thus retard the flow of the blood stream sufficiently to permit the clot to form. The clot afterward became infected. The virulity of the bacteria was reduced by the action of the antitoxin and other protective forces of the system over a period of ten days, so that there was but slight hemolysis of the blood cells, as evidenced by the high hemoglobin percentage, which was at no time less than 85 per cent.

The history of the antrum infection preceding the ear and mastoid infection is of interest. It is a matter of general observation that infection of the antrum following a tooth extraction or following curettment of a tooth socket in the floor of the antrum is much more vicious than when the bacteria gain access through the nasal route. There is probably a different bacterial flora around the roots of diseased teeth than in the nasal cavity. Naftzger, in an early paper read before this society, reported that the organisms found in the nose and sinuses are identical, while the organisms found in the mouth differ greatly, and that if mouth organisms gain entrance to the antrum, an acute infection quickly develops. In other words, the mucous membrane of the antrum has not developed an immunity to the mouth organisms.

Case 2. A boy, eleven years of age, was admitted to the Methodist Hospital, May 8, 1930. The patient had been sick for one week with influenza, which was prevalent at that time. He had a high fever, earache, chills and tenderness over the right mastoid region and the internal jugular vein. A free paracentesis of the right ear was made. This was followed by drainage of pus. Since he appeared very sick and the chills continued, he was taken to the hospital. On May 9, the day after admittance, the white cell count was 7,600; small lymphocytes 18 per cent and polymorphonuclears 82 per cent. The x-ray department reported that there was a "marked increase of density of all the cells of the right mastoid; the walls between the cells not broken down." The red cell count was 4,070,000. The second day in the hospital, the white count was 8,000. The temperature was 104 degrees and the patient had a slight chill. The third day, the temperature was 103 degrees, the white count 20,000 and there were casts, some pus and blood cells in the urine. As this patient was a child with a mastoid infection during an attack of influenza, early chills with the picket-fence type of temperature chart, a one-sided headache and tenderness along the internal jugular vein, a tentative diagnosis of hemorrhagic mastoiditis with blood stream infection was made.

A simple complete mastoid operation was performed. There was no breaking down of the mastoid cells. Some of the cells of the mastoid contained a small amount of pus. There was a small necrotic area over the sigmoid portion of the lateral sinus. The sinus was uncovered from the knee to the bulb. It was discolored, a dark gray and was firm to the touch. The sinus did not pulsate. The sinus was opened and a clot turned out. Free bleeding occurred above but not below. The sinus was obliterated. The upper end was packed with plugs of iodoform gauze.

A strip of gauze was used in the lower end for drainage. The jugular vein was empty and was resected from above the facial to the bulb. A gauze drain was left in the neck wound. For twelve days following the operation, the patient carried a septic temperature with chills and fever, during which time the urine contained casts, blood cells and pus. The twelfth day, the red cells numbered 3,000,000, the white cells 18,000 and the hemoglobin 65 per cent. Two weeks after the operation, the patient's temperature was normal and the urine was clear. One week later, the patient was dismissed from the hospital. During the illness, three blood cultures were taken and all were negative.

Most of the cases of hemorrhagic mastoiditis which Joseph Beck describes as 'thrombotic mastoiditis' are in children and follow an attack of influenza. The small thrombi form in the venules

TEMPERATURE CHART. PATIENT II.

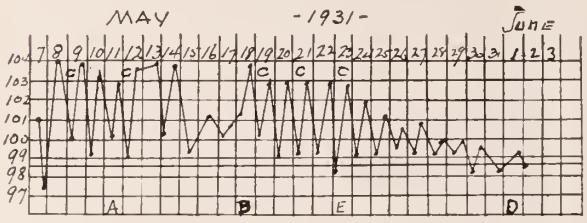


Fig. II.

A. Mastoidectomy. Sinus operation. Ligature of jugular.
B. Blood, pus in urine. White count, 20,000.
C. Chills.
E. 65 per cent Hemoglobin. 3,200,000 red cells.
D. Dismissed.

of the mastoid and are carried to the mastoid vein and finally may be pushed out into the lateral sinus. The infected material in the thrombi and venules of the mastoid may lead directly into the blood stream. The toxin and the bacteria are then thrown into circulation early, before nature has had an opportunity to build up a resistance, and the reaction is very severe. It is when a clot from the small mastoid veins reaches the sinus that a thrombosis of the sinus occurs.

An early operation with a thorough cleaning out of the mastoid cavity will eradicate the source of infection to the blood stream and early recovery may be anticipated. The organism producing hemorrhagic mastoiditis is always a streptococcus of hemolytic action and there is a rapid reduction in the number of red cells and in the amount of hemoglobin. There is little pathology. The mastoid bone and the sinus and its walls may not appear to be diseased. The continuous, septic course of temperature following the sinus operation in the above case of hemorrhagic mastoiditis was due, in part, to the hemorrhagic nephritis which occurred at the same time as the mastoid infection.

Kopetsky[6] reports two cases of hemorrhagic nephritis accompanying hemorrhagic mastoiditis. One, a boy two years of age, had an attack of influenza two weeks before an operation for bilateral mastoiditis. Six days following the operation, the temperature rose to 104 degrees and the urine contained blood casts and red cells. Another, a child seven years old, had an operation for mastoiditis three weeks after an attack of influenza. On the sixth day following the operation, there was a sudden rise of temperature to 104 degrees, and the urine examination revealed numerous blood casts and red blood cells. Both patients recovered. He did not regard the hemorrhagic nephritis in the two cases as a complication of the mastoiditis, but looked upon it as a factor accompanying the mastoid infection, both being produced by the same offender, the streptococcus hemolyticus.

In neither of my cases was there a pulsating sinus. There seems to be some controversy as to whether a normal sinus pulsates. In reviewing this subject, Kopetsky quotes and affirms Valenti's[7] statement that a normal sinus does not pulsate. If the sinus walls are of normal elasticity, the contained blood does not transmit the pulsations from the blood vessels of the underlying cerebral tissue. If the sinus walls are covered with granulations, thereby reducing their elasticity, there may be pulsations. While one would anticipate that a clot would transmit pulsations, often it does not. In my first case, the thrombosis had undergone purulent disintegration so that the contents were fluid and pulsations would not be expected.

In both cases, the eye-grounds were negative. If we accept the conclusions of Swift[8] that a congestion of the retina and choked discs are due to an obstruction of the flow of blood from the cranial cavity, then we would expect to find eye-ground changes frequently in sinus thrombosis. E. Blair Sutphen[9] reports eye-ground changes in one out of every five cases. The eye-grounds vary from a slight congestion of the vessels on the affected side to choked discs on both sides. Dr. Lille[10] reports four cases of choked discs in mastoid disease without apparent intercranial involvement. Two were perisinuous abscesses. One was a cholesteatoma pressing upon the sinus and in the other, the cause was unknown.

To those of us who feel that in the ligation of the jugular vein, we have a means of blocking blood stream infection and that the last word has been said in handling an infected thrombosis of the lateral sinus, it is interesting to review a paper written by Rott[11], who says that ligation of the jugular vein does not prevent absorption

of the toxin and bacteria into the general circulation and hence is a superfluous measure and that the only indication to be met in the treatment of sinus infection is the prompt removal of the infected area, whether the area is in the mastoid cells, the sinus plate, the walls of the sinus or inside the lumen of the sinus. Shambaugh,[12] in reviewing Rott's paper, says, "This is entirely in accord with our own observations. Ligation of the vein is entirely superfluous, as are our efforts to secure free bleeding in operating on sinus thrombosis. The primary object should be to open the sinus and secure free drainage." Kopetsky[13] says, "It is understood that the safest procedure to follow in every case of otitic sepsis wherein a thrombosis is found within the sigmoid sinus, is to ligate or resect the jugular vein on that side. I would be satisfied to wait before doing a ligation until there are further signs of sepsis. in a case where the clot turned out freely and I had free bleeding from both the torcular and the bulbular ends of the incised sinus." Potts[14] reports sixty-three operations for sinus thrombosis in which the jugular vein was tied in fifty-three cases.

While there is no fixed and unalterable rule for the treatment of sinus thrombosis, one will feel much more comfortable in caring for a case if he follows the time-honored custom and ties off the jugular vein, for that is the direct route for the entrance of the septic material into the blood stream. On the other hand, could we be sure that the clot remaining in the sinus bulb was sterile or that a drain in the open sinus would carry off the septic material, then a simple drainage operation might satisfy. In the two cases I have described, there was no bleeding from the bulbar end and the ligation of the internal jugular vein was made. In tying off the jugular vein, there is little added shock to the patient. The general surgeons who assisted me did the ligation quickly and neatly and I think another safeguard was added to help localize the infection in the mastoid region.

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Discussion

Dr. Sumner B. Chase, Fort Dodge: Recently there has been considerable thought and discussion among men handling cases of lateral sinus infection, as to the best method of procedure. The main point in the discussion is whether or not to add ligation of the internal jugular vein in the neck to drainage or other procedure. The point brought out by those not in favor of ligation is that the procedure does not necessarily eliminate, or block off, the area of infection from the general circulation. As to this point there is no argument; it does not, although it helps in many cases. It does not, if rapidly and efficiently done, add a great deal to the shock of operation. The main point to be considered in the question is whether or not the procedure *lessens the danger* of operative procedure on an infected lateral sinus and theoretically and practically, I believe that it does. Anyone that has gone repeatedly into the vascular sheath of the neck, exposing the internal jugular vein, has been impressed with the tremendous negative pressure or suction in this vessel as shown by its flattening or collapse upon each inspiration. If in operative interference on the lateral sinus, we dislodge a piece of infected thrombus, we do not know where it is going to lodge; in a pulmonary vessel, or where it will stop, possibly with disastrous results. It is true that another thrombus may form at the point of ligation, extending below the ligature, but so far as I know there is nothing in the literature concerning such a situation or any reports of adverse complications resulting from the constriction of the vein by a ligature. While we know that ligation of the internal jugular vein in the neck does not close off all avenues of absorption, it at least closes off the only one where infective material is being forcibly and mechanically sucked into the general circulation. Time and a sufficient number of cases under control will prove whether or not ligation in the neck is necessary or advantageous; but at present, because of the foregoing reasons, I believe that ligation of the vein in the neck adds an element of safety and should be done *before* there is any manipulation in the sinus.

I wish to emphasize one point in diagnosis which we have found to be nearly always present, especially in extensive involvement of the sinus; namely, localized tenderness along the anterior border of the sternomastoid, and along the course of the sinus through the mastoid, with localized pain and headache along the course of the sinus in the skull. The history, blood cultures, eye-ground findings, spinal manumetric tests, metastasis, etc., may all be obscured or difficult of interpretation because of other factors in the case, but the localized tenderness and headache have been very definite in all of our cases and in some, the main diagnostic point.

Regarding the mortality of this complication, I believe that Dr. Parker refers only to lateral sinus thrombosis. If lateral sinus phlebitis is included, I believe its mortality will be very much higher, either

operated upon or left alone. When a thrombus forms, nature is doing her best to wall off and overcome the infection, but in the cases in which no attempt at thrombus formation or limitation of the process is shown, the mortality is very high. There is simply a thickened, inflamed vein, with a greyish flocculent exudate on the intima. A virulent infecting organism is present, and the bodily resistance is at low ebb.

Repeated transfusion of whole blood is a valuable, and practically the only worth-while adjunct to operative interference. It rapidly replaces the destroyed blood cells, and possibly adds more potent antibodies that may aid in overcoming the invading organism. It will be of great aid and interest if a bacteriophage can be developed that is specific for the types of organisms producing blood stream infection as a complication of mastoiditis.

As to cases recovering without operation, I should say that this is possible, and many cases are on record, but there is no method of determining absolutely that a thrombophlebitis is present except by opening the sinus. The vein may be completely blocked by a septic thrombus and present a practically normal appearance; on the other hand, all of the symptoms of sinus phlebitis or thrombosis, with few exceptions, may be produced by a septic phlebitis of an emissary vein. Therefore, in cases recovering without operation there is always a question as to whether or not the condition of septic thrombophlebitis or septic phlebitis existed in the lateral sinus. In my opinion, if an extensive septic thrombophlebitis exists and it is not operated, the patient will have a long, stormy, septic course with the chances of ultimate recovery very much against him. I have seen one such case, one of chronic suppurative otitis media and mastoiditis, that came to operation. The lateral sinus was found to be completely occluded and its lumen obliterated by an infective process. The patient presented the appearance of a case of advanced tuberculosis, because of the septic process extending over a period of nine months.

In closing, I wish to express my own appreciation and I am sure that of the section, to Dr. Parker, for his very excellent presentation of an interesting and timely subject.

Dr. Steve A. O'Brien, Mason City: Dr. Parker has wisely and with a definite purpose reported one case of lateral sinus thrombosis following an acute hemorrhagic mastoiditis and one following a coalescent mastoiditis. This immediately brings to mind the two different types of pathology. In the one there is a thrombosis of the small veins which can extend to the larger veins and cause a thrombosis from within while the sinus may appear normal to inspection, and in the other there is an extension by contiguity which first makes its appearance on the outside of the vein.

In the first case he reports there was evidently a perisinuous abscess present at the time of operation. Dr. Parker did what the majority of us probably would have done, namely, cleaned out the mastoid and finding the bony covering of the sinus wall apparently normal did not expose the sinus. But the fact that the patient had chills and elevation of temperature to 103 degrees on the eleventh day and continuing for three days should make us suspect sinus involvement. The fact that the hemoglobin did not fall below 85 shows the high resistance of the patient to the infection, or that the infecting organism was not of a hemolytic nature. Usually, however, in a coalescent mastoiditis we do have a reduction of hemoglobin as soon as the disease involves the large blood vessels, and we do not get a positive blood culture until the disease reaches the interior of the sinus.

The second case was one with complications in which the blood findings could have been caused by the complications as well as by the mastoiditis, and as a result could not be relied upon for progress of the ear condition. X-ray would not have given much information here either. This is a case where the doctor had to depend on his judgment and clinical symptoms as to when to operate.

In a coalescent mastoiditis repeated x-rays are of much value in showing the progress of the disease, while in hemorrhagic mastoiditis they do not have the same value. A daily white count in a coalescent mastoiditis is of value, while a daily red count and hemoglobin percentage is of more value in a hemorrhagic type. I do not think it wise to wait for a positive blood culture before exposing the sinus, if the blood findings, temperature chart, chills and headache, point to its involvement.

Dr. Parker did not say anything about blood transfusions. I believe in transfusing all thrombosis cases which do not show satisfactory progress, and to give more than one where progress is slow. Frequently in children it is difficult to find a vein of sufficient size, and I have on two occasions given the transfusion directly into the internal jugular vein at time of operation.

I see no reason for ligating the internal jugular vein when a small clot can be readily removed or when the clot is above it, but where the clot is below I believe in bilateral ligation.

THE SYNDROME OF INTERNAL DERANGEMENT OF THE KNEE JOINT*

A General Review of Semilunar Cartilage Injuries, and Loose Bodies

JACOB KULOWSKI, M.D., Iowa City†

The writer wishes to call attention to a clinical group that is in great part responsible for acute and chronic diabilities of the knee joint. These are classified as internal derangements. Even the orthopedic surgeon has, in the past, considered

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some of these lesions as rare conditions. Today we know that many lesions have been looked upon as medical curiosities because they have not been recognized. However, a knowledge of the so-called uncommon conditions does much to clarify common, though none the less obscure, clinical entities in our everyday practice.

It is my purpose to consider, in a general way, the anatomy, functions, and pathology of the knee joint as they are related to internal derangement, and to review briefly the common semilunar cartilage injuries as well as the unusual clinical lesions, characterized by loose bodies; such as osteochondritis dissecans, osteochondromatosis, hypertrophic osteophytic bodies and chondromalacia of the patella.

Definition: An internal derangement of the knee is a mechanical disorder caused by a product of the joint itself. The obstructing tissue may be the result of either a traumatic or pathologic process, and is always intra-articular.

History: Ambrose Pare, in 1558, successfully removed a loose body from the knee. It was not until 1877 that Annandale operated upon the first case that was due to a lesion of the semilunar cartilage. Monroe, in 1758, recognized the fact that loose bodies might be derived from the articular ends of long bones. John Hunter, one year later, learned that these could also arise from hypertrophic exostoses. Kölliker, in a later generation, found cartilage cells in the synovial villi. These three men, Monroe, Hunter and Kölliker, outlined the three main sources of loose bodies. William Hey, in 1784, of Hunter's own hospital, originated the term "internal derangement." In his own words, "The complaint may be brought on by any such alteration in the state of the joint, as will prevent the condyles of the os femoris from moving truly in the hollow formed by the semilunar cartilages, and the articular depressions of the tibia." Anatomic studies, initiated in 1836, further clarified the problem. Due to the fear of sepsis, surgical treatment was slow in progress, and for some time certain unqualified practitioners (bone-setters) subjected every knee available to manipulation, no doubt with disastrous consequences to the patient.

Derangements of the knee joint were known to Hippocrates and other surgeons of bygone days, but were erroneously interpreted as true dislocations of the knee.

ANALYSIS

In attempting to elucidate mechanical derangements of the human body, one must advert to the basic normal situation. In a recent publication, the writer showed that flexion contracture of the knee is a fixed exaggeration of the normal mechanics of the joint, and is merely an expression of a new pathologic equilibrium. Similarly it will be shown that the finely balanced, anatomic functional relations of the joint predispose it to derangements. In the following discussion we shall consider the anatomic, functional, and pathologic situations of internal derangement of the knee.



Figure I

Anterior view of the knee joint, with the patella reflected downward, and the joint fully flexed. The crucial ligaments stand out boldly. The remarkable looseness of the lateral meniscus is evident, and the relaxed lateral ligament is clear of the cartilage. The medial cartilage is fixed in its position and is intimately related to the medial lateral ligament. It may also be noted that the lateral surface of the femur is built higher to help counteract the natural tendency of the patella to lateral displacement. The curve of the medial condyle accommodates and helps to initiate the "screw home rotation," but it is also evident that the tension of the anterior crucial ligament, in full extension, is also a factor.

(Photograph by courtesy of Dr. MacEwen.)

I. *The anatomic situation:* The knee is the largest and most complicated joint of the body. Its peculiar anatomic construction is an expression of the very exacting static and dynamic require-

ments which it must meet, namely: adequate stability combined with unrestricted motion in the face of great weight-bearing stresses. A point to be emphasized is that, in such an intricate joint as the knee, in which all the structures are of necessity so harmoniously related, all its separate parts are equally important both functionally and anatomically. The femoral, tibial and patellar articular surfaces offer an extensive area to disorganization. The lack of exact anterior symmetry of the condylar surfaces superinduces rotatory deviations at the completion of extension and beginning of flexion. Because of their further incongruity with the tibial articular surfaces, there are interposed the two semilunar cartilages. The posterior half of the medial one is intimately attached to the medial lateral ligament. This explains its predilection to trauma and attending ligamentous symptoms. The semimembranosis and the vastus medialis are partially inserted into the medial lateral ligament, and may strain the latter by muscular action alone, or involve it in pathologic processes peculiar to them. The anterior portion of the medial cartilage is sometimes attached by a bifid process which precipitates the longitudinal tear or fracture so commonly noted. Furthermore, these menisci are partly fibrous, and are therefore more prone to tear longitudinally in their substance than they are to fracture transversely. The relationships of the tibial spine and the crucial ligaments to the internal semilunar cartilage makes them subject to injury by the same mechanism! The attachment of the posterior crucial ligament to the anterolateral surface of the medial condyle subjects this portion to continuous strains. The importance of the capsular structures may be further emphasized when it is noted that the lateral ligaments of the knee are really only thickened portions of the capsule and that the capsule's chief function is to support the synovial membrane. These two structures are most intimately related and cannot be anatomically differentiated, in most instances, at operation. Both crucial ligaments are also developed from thickenings of the capsule in the intercondyloid notch. The anterior crucial is made tense on full extension and the posterior crucial likewise on flexion of the joint. They thus prevent anterior and posterior subluxation of the tibia.

The reflections of the synovia and capsule in the intercondyloid notch would divide the joint into a medial and lateral space were it not for the complications of the patellar articulation which unites these two anteriorly into one great compartment. The posterior part of the joint, however, is separated clinically from the anterior by these same reflections.

The capsular reflection from the lower pole of the tibia excludes the patellar ligament from the joint. The fat pad is in the space between the patellar ligament and the joint. It pushes the synovia backward between the two articular facets of the tibia in a cone-shaped mass, and forms the ligamentum mucosum which is usually attached to the anterior crucial ligament. The ligamenta alaria are peculiar fringe-like lateral extensions of the ligamentum mucosum which rest on the anteromedial surface of the semilunar cartilages.

The patella tends to displace laterally in extension and so the vastus internus passes well down on the inner side to counteract this. The femur is also built up on the outer condyle (see Figure I). The capsule includes so much of the juxta-articular epiphyses of the femur, that lesions of the latter, in certain instances, find expression in the joint.

II. *The dynamic situation:* The knee is a trocho-ginglymus (compound) joint, and allows rotation about a vertical axis as well as flexion and extension. This rotatory departure from a true hinge-like action, though slight, is probably the chief cause of internal derangements! To prevent misunderstandings in the interpretation of the mechanism of traumatic derangements, it should be emphasized that either the tibia or the femur may be reckoned as the fixed point of the knee lever system. In the following discussion, the tibia is considered to be the fixed part.

In the sagittal plane, the initial twenty degrees of flexion is a pure rocking motion; then, owing to the diminution of the posterior condyles of the femur, the axis of rotation decreases, and the completion of the excursion range is a gliding one. During the gliding range the joint is relaxed, and is therefore exposed to external influences; particularly the external rotatory and tangential forces accompanied by abduction, which produce derangements. Motion occurs above and below the cartilages. The infrapatellar fat pad is pulled out of the way during full extension, but is nevertheless slightly impinged. Recurrent nipping of this structure, incident to relaxation of the quadriceps, femoris, and abnormally high patella, or trauma leads to hypertrophy and fibrosis, and eventually to anterior mechanical block. Of the sixty or more synovectomies performed in this clinic, the twelve cases exhibiting this type of derangement were relieved following operation, in which the pad was removed.

In the horizontal plane the center of rotation is nearer the medial condyles. The outer cartilage describing the greater arc must be freer to dodge, whereas the pivotal medial meniscus which is less

detachable, is in greater danger of being ground off or torn. The lateral condyle projects further forward which initiates the femoral inward "screw home" locking of the joint in full extension. Similarly, an unscrewing action, at the beginning of flexion takes place. (With the femur as the fixed point, external rotation of the tibia occurs, due to the biceps femoris acting through a longer lever arm than the medial hamstrings. This deviation is further encouraged by the unwinding action of the crucials and the loose attachment of the external meniscus.)

Due to the normal valgity of the knee in the frontal plane, more weight is borne upon the outer condyles. This tends to separate the inner parts of the joint and creates additional strains upon these structures. In some instances, abnormal lateral mobility of the patella is congenitally pres-

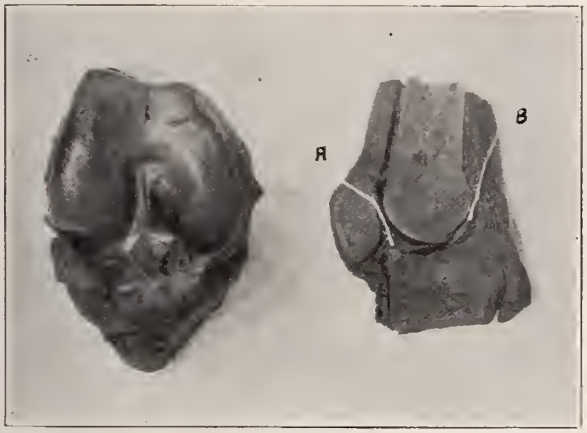


Figure II

The left figure demonstrates the ligamentum mucosum and the alar ligaments with the attachments of the former in the intercondyloid notch. The fat pad has been removed, and only the synovial membrane remains. The figure on the right is a sagital section through the joint. Pointer A marks the fat pad and its synovial projection into the joint. Pointer B marks the anterior crucial ligament which is taut in full extension. The extent of the suprapatellar pouch is clearly noted.
(Photograph by courtesy of Dr. MacEwen.)

ent and may cause derangement, as well as constant additional strains on the patellar and femoral articular surfaces.

It is concluded therefore that the medial side of the joint is the "locus minoris resistentia." External forces are the greatest etiologic factors in causing derangements, when acting upon a partially flexed and therefore relaxed knee joint.

III. *The pathologic situation:*

A. *Lesions of the semilunar cartilages:* Aside from the more or less rare type of cystic degeneration associated with the external cartilage in almost all cases, the lesions here are due to injuries that result in tears, fractures, and loosening or even complete avulsion of the cartilage. Cysts result from a mucoid degeneration of the connective tissue at the point where the tendon of the popliteus crosses the lateral meniscus. The cartilage itself seldom shows any evidences of actual involvement. Pathologically this may be classified as a ganglion. The most common type of injury results in the "bucket handle" fracture or tear (so-called because of its resemblance to the old English leather bucket). Transverse fractures are also commonly noted. The less spectacular hypermobile or loose cartilage may cause marked symptoms, and should not be overlooked. (Too often a hypermobile cartilage is all that is noted while more important, though less obvious, changes in the joint are missed.) The fate of the joint, in recurrent cases, is the inevitable general arthritic sequellae.

B. *Loose bodies:* We must remember in this connection that we are dealing with connective tissues of low differentiation in the knee joint. These connective tissue cells may, under favorable conditions, revert to embryonic activities, and form bone or cartilage with equal facility. The joint cartilage in childhood is simply a portion of the cartilaginous epiphysis, and may be viewed as essentially an embryonal tissue doomed to eventual ossification.

The loose body itself expresses an end result process subsequent to some pathologic reaction, usually an aseptic necrosis. Loose bodies all tend to approach a common morphology, and are grouped under the common heading of corpora libera articulorum or joint mice (corpora oryzoidea, unorganized tissues, or rice bodies). Necrotic and degenerative, but no inflammatory changes, are noted in the bodies themselves. The primary underlying pathology may involve either the bone, cartilage, or synovial membrane, alone or combined. In general, they are classified as either organized or unorganized. The unorganized types are composed of unorganized fibrin or necrotic portions of synovia. The organized class is composed of organized tissues such as bone, cartilage, organized fibrous tissue, alone or variously combined. It is to the latter group that I would direct your attention. Loose bodies may be single or multiple, pedunculated or free; some are laminated and some are not. Trauma and possibly some hereditary constitutional factors are the etiologic elements underlying this localized tendency to aseptic necrosis.

After the body has become loosened, degenerative and regenerative changes take place in it, both while it is attached, and when it is free. When it is attached by a pedicle, it may be nourished through blood vessels, and the degenerative processes may be slight. Proliferative changes may be considerable during this period; however, both

cartilage and bone tend to necrosis. After complete liberation, necrosis and accompanying calcific changes are accelerated, but the fibrocartilage and the fibrous tissue along the surface of separation continues to be nourished by the synovial fluid, and proliferates, thus gradually increasing the size of the body. The fibrocartilage gradually absorbs the necrotic tissues, calcification takes place, and an extremely pathologic type of new bone, sometimes resembling the embryonal variety, may be formed in layers in its superficial portions.

1. *Osteochondritis dissecans:* This forms the classical free or loose body. It was first described by König in 1888. It is composed of bone and cartilage, and arises, as a rule, from the anterolateral border of the medial condyle, which usually presents a corresponding defect after the body has become completely liberated. (It may also occur in other joints.) The body is usually single, and any other joint pathology present is secondary. It is generally circular or oval and about the size of an almond. Its free surface is convex and of cartilaginous consistency. The former site of attachment is flattened and rough. It may require a secondary adhesion to the synovial membrane. It is a portion of the articular surface which is detached either immediately by trauma or more gradually by a localized progressive pathologic process following trauma. Microscopically it is not always a total sequestrum because either the cartilage or bone cells may be living. Heredity, as an etiologic factor, has received some support in a recent article.

2. *Osteoarthritic osteophytes:* Typically these are osteoarthritic outgrowths but may arise from the cartilage or synovia. They are associated with general arthritic changes in the joint, and lipping, and are peculiarly exposed to injury in certain situations. If incompletely detached they are found adherent by pedicles of varied thickness to the joint margins. As a rule, they are multiple. Microscopically they are differentiated from other loose bodies by their characteristic three layers: a middle layer of well developed fibrocartilage with spherical cells, which is invested by a perichondrium of fibrous tissue with flattened cells, and the inner cancellous bony layer, in which the cells are dead. The underlying pathology is the inflammatory response of the joint to an irritation of low grade intensity, which may be mechanical or toxic.

3. *Osteochondromatosis (or chondromatosis):* This was first described by Reichel in 1900. In this condition, there are noted multiple cartilaginous bodies in the synovia and also loose in the joint, ranging greatly in size and number. They arise from the deeper layers of the synovial membrane which is made up of cells of very low differentiation. Originally, in early embryonic development, all the tissues of the knee joint arise from the same layer of the blastoma. Later, as development and differentiation proceeds, certain cells form cartilage, some bone, and others the synovial structures. Therefore these connective tissue cells of such low differentiation are prone, under favorable stimulation, to form loose cartilaginous bodies. (On the other hand, the synovia may normally have cartilage islands which may abnormally proliferate in response to chronic irritation.) It occurs most frequently in the knee, but has been observed also in the elbow, shoulder, hip, ankle and wrist, in the order named. The bodies are smooth on the joint side due to pressure. Sometimes mucinoid degeneration is centrally present. In the laminated variety, the lamination is due to alternate layers of calcification in the cartilage between which are the layers of uncalcified cartilaginous tissue. Usually some bone is noted in these bodies.

C. *Chondromalacia of the patella:* This condition was first recognized by Büdinger in 1906, who classified it as "fissures of the patellar cartilage." In 1910, Ludloff presented one case. In 1926 Läwen reported 13 cases. In the same year Fründ wrote of "Traumatic Chondropathy of the Patella as a Circumscribed Disease." König originated the present name for this condition in 1926. There have been, until now, no reports in the English literature. In chondromalacia, primary pathologic changes consist of circumscribed swelling of the articular patellar cartilage with fissuring and erosion of the bone. Free bodies are finally formed. Secondarily, there is an hyperthophy of the synovial membrane and fat pad, the latter sometimes clinically obscuring the primary lesion.

D. *Chronic synovitis* may be primary or secondary, and is frequently associated with internal derangements. The synovia is prone to react to irritations by a villous proliferation which is a forerunner of impingement and even loose bodies. As the condition becomes more and more chronic, the synovia becomes fibrotic, thus shutting off the avenues of the normal fluid drainage, and resulting in a persistent joint effusion and some degree of relaxation.

CLINICAL DISCUSSION

The symptoms of internal derangement are chiefly subjective, and are due primarily to mechanical obstruction and secondarily to the reactions in and about the joint. In many instances an exact diagnosis is impossible without actual operative exploration of the joint. However, in a general way, the symptoms typify the mechanical obstructive lesion, and the basic diagnosis of internal derangement may be made with a certainty that few other conditions or diseases permit.

I. *The lesions of the semilunar cartilages:* The original onset occurs most frequently in young active adults. The trauma may be severe or even insignificant. Those of the external cartilage usually follow the more violent forms of injury. The pain is acute, causing the victim to fall down as a rule; sometimes to faint. This symptom is referable to either the medial or lateral side of the joint,

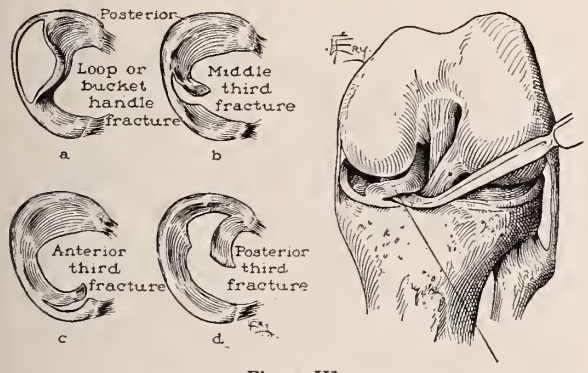


Figure III

The left figure illustrates the common types of lesions of the menisci. The right demonstrates the position of a bucket handle fracture.
(Both photographs from Henderson.)

depending upon which semilunar cartilage is involved. An effusion invariably follows, and the patient states that the knee could not be fully extended. If the posterior end of the meniscus is affected flexion is rarely limited. The slight or moderate block to full extension is readily determined on examination by active or passive movements of the joint. It may, in mild cases, be entirely missed unless carefully compared with the sound side. Because the medial lateral ligament is so often involved in injuries to the internal cartilage, Steindler's four cardinal diagnostic criteria, applicable to all ligamentous sprains, will be elicited; namely, point of maximum tenderness over the ligament on pressure, position of relief when the ligament is relaxed, position of aggravation when it is put on a stretch, and complete relief following immobilization. Attempts at fully straightening the knee will be painful, and tender points will be noted over the injured parts of the cartilage. The characteristic points of tenderness are elicited over the antero-internal or lateral border of the tibia or over the semilunar cartilage. The best way to obtain the latter is to place the thumb over the interarticular interval a little to the side of the ligamentum patellae when the knee is flexed. The knee is then slowly extended, and when the anterior end of the cartilage comes in contact with the thumb, the patient will experience pain.

In cases of semilunar cartilage cyst, there is no unusual history of locking or snapping, the tumor is usually visible or palpable, and it moves with the tibia in flexion and extension.

In the older recurrent types, the subsequent attacks are not, as a rule, as severe as the original one. There is a history of recurrent locking and effusion of the joint. Pain is always present to some degree and may become progressively worse. In the bucket handle forms, the intervals between attacks may be entirely free from symptoms until the inner loop finally lodges in the intercondyloid notch, after which full extension is impossible. Locking as a symptom may be variously modified, the complaint being merely a slipping, catching, weakness or giving way of the knee. Some degree of swelling is always present. Reflex atrophy or atrophy of disuse is usually noted. There may be some degree of lateral instability of the joint. In some cases a well marked "click" or "snap" accompanies movement. Limitation of movement may also be due to the presence of adhesions which occur in many situations.

II. *Loose bodies:* The puzzling manifestations of loose bodies are more readily understood if all their physical possibilities are kept in mind. The clinical picture depends upon certain of these qualifications: a partially detached fragment may lie flush with the articular surface, and cause practically no trouble, or may be capable of considerable movement; it may be free in the joint, or become secondarily attached to the membrane. Classically there are sudden attacks of severe pain followed by swelling or momentary locking. These attacks are due to the nipping of the body between the articular ends or between the capsule and the joint ends, in which latter case it is palpable. The larger bodies give rise to less acute symptoms because they are less likely to engage between the articular surfaces. In those cases due to osteophytic outgrowths, there are the usual accompanying arthritic signs and symptoms. Owing to their number and size, in osteochrondromatosis, the bodies are apt to become caught much more frequently, but give rise to less acute symptoms. The difficulty in the diagnosis of osteochrondromatosis lies chiefly in the early cases which may simulate a general arthritic involvement. There are those

who believe that arthritis deformans is closely related to this condition. The patellar cartilaginous degenerations may advance to loose body formation, and as a rule the pain or discomfort is localized in the patella or the anterior part of the joint. Osteochondromatosis occurs in young adults who give a history of chronic disability, locking, abnormal mobility of the patella, fatigability and swelling. Characteristically there is no localized patellar pressure tenderness except in flexion. Those rare cases due only to lateral mobility of the patellar are easily recognized, although the patient usually refers to the condition as a medial dislocation because of the prominence of the medial femoral condyle.

X-RAY EXAMINATION

It seems hardly necessary to emphasize the importance of x-ray examination in all cases of internal derangement of the knee joint. There is a typical picture for many of the lesions encountered. In cartilage injuries the only change noted in uncomplicated cases is a narrowing of the joint space on the affected side. Air, oxygen and iodized oil injections into the knee joint have been described as an aid in the diagnosis. These are not without dangerous consequences, and have thus far not been employed in this clinic. The arthroscope, an instrument devised for the direct visualization of joints and based upon the principles of the cystoscope, may gain a wider clinical application. Free bodies are visualized, depending upon the amount of calcification or ossification present in them. In osteochondritis dissecans, the loose body with its corresponding defect is usually outlined, but one must be on the watch for it. In some of these cases only a faintly delineated infarct-like area may be visible upon the medial condyle following a history of trauma, and the subsequent loosening of the body may be predicted. Steindler has, in several instances, definitely made this early probable diagnosis. The patella, in chondromalacia, is distinctly fuzzy, and shows partial fragmentation, which may or may not be associated with loose bodies in the anterior part of the joint. From this must be differentiated patella biparte (congenital malformation due to an excessory center of ossification of the patella) and fracture. A transverse fracture of the patella is self-evident. In longitudinal fractures, which are seldom encountered, the outer fragment is larger than that seen in the congenital malformation. Furthermore, in patella biparte, the fissure is seen in the upper outer quadrant of the patella, and is generally bilateral and symmetrical. Above all, these latter two lesions are not associated with the pathologic changes noted in chondromalacia. What constitutes an abnormally high patella is a moot question, but in general, it may be stated that it is one whose lower pole is above the joint when the knee is fully extended. It is generally felt that most of the lesions causing internal derangement are unilateral.

DIFFERENTIAL DIAGNOSIS

Some of the conditions that must be considered in the differential diagnosis are: ligamentous ruptures, fractures of the tibial spine and articular injuries, periarticular exostoses, other types of loose bodies, chronic arthritis, hypertrophy of the infrapatellar fat pad, hypertrophy of the alar ligaments and juxta-articular lesions. The symptom of locking is most characteristic for cartilage lesions and free bodies.

The diagnosis of rupture of one or both crucial ligaments is a matter of considerable uncertainty. This lesion is usually accompanied by damage to the internal lateral ligament, and may also be associated with displacement of the internal semilunar

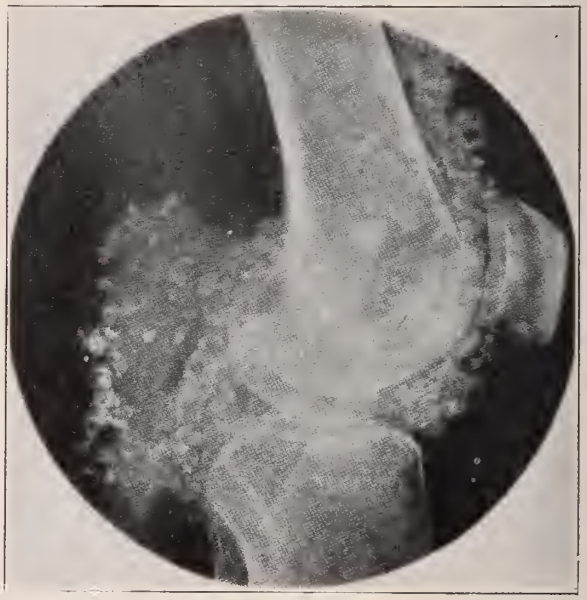


Figure IV

This figure shows a typical osteochondromatosis of the knee joint. The bodies are well developed. In earlier cases they may be made out only with difficulty.
(Photograph from Henderson.)

cartilage. The graver the injury, the more likelihood there is of crucial ligamentous involvement taking place. It may be broadly stated that one should always suspect more extensive complications subsequent to the graver causal injuries. Lateral mobility is present in the semiflexed position of the joint. When the anterior crucial ligament is torn, the leg can be subluxated forward on the femur with the knee in extension. If the posterior one is ruptured (this is a rare occurrence), the leg can then be subluxated posteriorly

with the knee in flexion. If both crucial ligaments are involved there results a variety of flail knee, and the patient cannot walk without some mechanical support.

Tears of the lateral ligaments are easily recognized because of the resultant abnormal lateral instability on the affected side. Pain and tenderness is present especially over the lower attachment of the ligament, and there is no locking.

Periarticular exostoses may give rise to painful locking, which, however, is usually of a momentary nature, and is not followed by effusion. There is absence of tenderness at the diagnostic points, and the x-ray findings clinch the diagnosis.

Fractures of the tibial spine present a bony block to full extension but are easily noted on x-ray examination. The usual signs of cartilage derangements are absent. However, some difficulty may arise in differentiating this from the loose bodies discussed. It should be remembered that free or loose bodies, similar in nature to the usual form of osteochondritis dissecans described, rarely arise from the patella or some other unusual situation.

Chronic arthritis may simulate internal derangement, but pain and tenderness are usually generalized. True locking of the joint is seldom present, but the complaint is frequently made of a giving way or weakness in the joint. The x-ray furnishes further proof of the usual arthritic changes.

Hypertrophy of the infrapatellar fat pad can be seen and enlargement will be apparent. The bulging occurring on either side of the ligamentum patellae. Full extension may be painful. True locking is rare but the patient complains of slight pain and recurrent effusions after exercise.

Hypertrophy of the alar ligament is usually difficult to differentiate actually from true semilunar derangements, but locking is usually absent.

Of the juxta-articular lesions giving rise to symptoms of internal derangement mention may be made of tumorous (very rare) and inflammatory involvements. True inflammatory lesions of the epiphyses are rare. Metaphyseal disease localizations often find expression in the joint, but if one is watching for them, the accompanying constitutional reactions point to something other than a true mechanical derangement. The formation of joint sequestra is not rare in osteomyelitis, but loose bodies in tuberculosis are extremely unusual. In the tabetic arthropathy, loose bodies may be a prominent feature, but the characteristic generalized, degenerative and proliferative changes plus the other clinical data should clarify their origin.

The recent observation of an unusual disease (known as Pellegrini-Stieda's disease) prompts its introduction into this brief discussion of the differential diagnosis. It was described by Kohler in 1903 and by Stieda and Pellegrini in 1905. It is characterized by a bony formation at or near the medial condyle of the femur, and is always traumatic in origin. Some believe it to be of periostitic origin and some maintain that it arises from the surrounding connective tissue. This lesion is more frequent than is generally believed. This is probably the first reference to an observed case in the English literature. It is usually unilateral and the symptoms are pain and functional impairment, usually with some swelling. The treatment consists of conservative early, and operative removal in the later state of bony formation. The results are equally gratifying.

Our patient was a male, aged twenty-nine, who twisted his knee during a ball game. The pain was localized to the medial condyle of the femur, and was progressively getting worse. There was, on examination, some limitation of flexion and extension with moderate swelling. The x-ray showed the typical lesion over the upper border of the medial condyle. At operation a bony mass was found to be in intimate relation to, but not actually involving, the medial lateral ligament, and infiltrating the tendinous insertions of the vastus medialis and adductor magnus muscles. The bone and periosteum were apparently normal. He made an uneventful postoperative recovery.

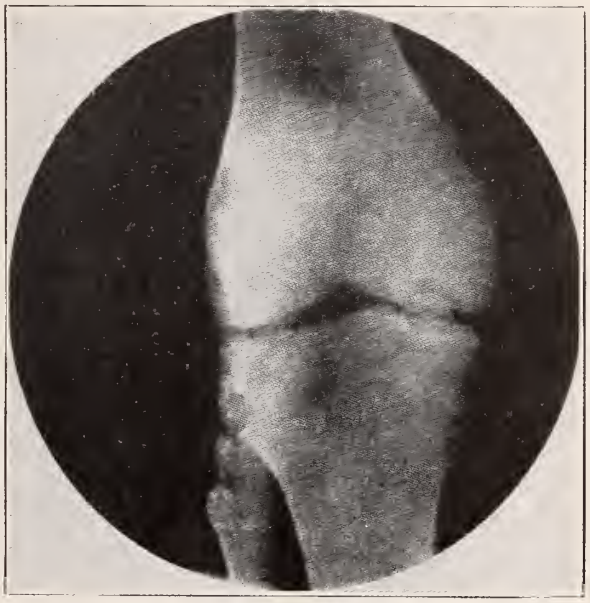


Figure V

Depicting the lesion of osteochondritis dissecans, with the fragment partially attached. In most cases the free body wanders from its site of origin.
(Photograph from Henderson.)
(Since Figures IV and V were made, two classical similar x-rays have been observed in this clinic.)

TREATMENT

I. *Acute cartilage lesions:* These should be accurately reduced by manipulation of the joint to full extension, and retained in this position for about three weeks, so that repair may occur if physiologically possible. An anesthetic may or foot while he steadies the knee. The knee is flexed, and the leg rotated inward and outward to release the cartilage. Pressure is maintained over the meniscus, and with the leg adducted or abducted, depending upon which cartilage is affected, the knee is now sharply actively or passively exmay not be required. With the patient supine, the surgeon stands on the outer side, and grasps the tended. An audible snap and full extension spells a successful reduction, and full flexion and extension is now possible, actively or passively. Following the period of immobilization, an elastic bandage, physiotherapy and gradual weight bearing is resumed. To relieve any residual ligamentous strain, the heel on the inner or outer border is built up about three-sixteenths of an inch.

II. *Recurrent lesions of the semilunar cartilages:* Surgical intervention is indicated. The offending cartilage should be totally excised, and any other associated pathology dealt with as necessary. A tourniquet facilitates the exploration of the joint. Ordinarily the patient should be placed on the operating table so that the bend of the foot piece comes directly under the knee. Following the preparation of the limb, the foot of the table is dropped, and the leg falls with it. The operator sits on a stool, and steadies the foot between his knees. In the uncomplicated cases a small curved incision over the junction of the anterior and middle thirds of the cartilage is sufficient, but in doubtful cases it is best to employ the "general utility" medial patellar route. The patella is then dislocated laterally, and the entire anterior compartment of the joint may easily be inspected. As a rule the majority of cases of internal derangement can be accurately diagnosed before operation; but in all doubtful cases complete exposure is imperative. Long incisions also minimize the dangers of postoperative infection. The most rigid aseptic technic must be observed, and the ungloved finger should not be introduced. Towels are clipped to the skin wound edges immediately. In order to minimize the exposure of the joint cavity, all the tissues are divided down to the synovial membrane in the entire incision, and the latter incised last. Great care must be exercised to avoid injury to the articular surfaces as well as the ligamentous structures. The cartilage is freed anteriorly, and grasped with a strong toothed forceps (Martin's). The border attached to the medial lateral ligament is carefully removed with long curved scissors. The posterior attachment offers some difficulty, and a tonsillar type of snare will facilitate its removal with little danger to the posterior crucial ligament. Careful apposition of the synovial and capsular structures is essential in the closure of the wound. Fine interrupted catgut is used for the synovial and subcutaneous layers, chromic catgut for the capsule, and interrupted dermal for the skin. No drainage or postoperative immobilization is necessary in uncomplicated cases, although a posterior plaster splint is usually advisable for several days. Postoperative discomfort is minimized if all bleeding points are meticulously ligated. A snug postoperative dressing also lessens the tendency to fluid accumulation. Great amounts of secretions can be absorbed from the knee joint, but as a rule, the temperature will rise to a moderate degree for several days. If there is any doubt as to the possibility of infection, the joint should first be aspirated, and the character of the fluid carefully determined bacteriologically. If no organisms are present conservative observation and aspirations will clear up such complications of this type as do occasionally occur. If a frank infection results, the joint should be adequately drained by the Orr method. Active motion is ordinarily begun as soon as the patient can tolerate it. Weight bearing and physiotherapy is instituted after the wound has healed; from seven to ten days as a rule. Both cartilages may be removed with impunity, if indicated.



Figure VI

The entire articular cartilage of the right patella after its resection. The degenerative ulceration is typical, and the loose bodies were removed from the anterior compartment of the same joint.

III. *Loose bodies:* All loose bodies giving rise to mechanical disorders should be surgically removed, if the patient's condition permits. The posterior part of the joint is exposed by Henderson's posteromedial or lateral approaches just above the hamstring tendons. In osteochondritis dissecans and other lesions involving the articular cartilages, the defective areas may require curettage or even partial arthroplastic procedures, depending upon the extent and activity of the pathologic process present. Sometimes it may be necessary to remove entirely the articular surface, particularly in patellar lesions. All secondary pathology must be dealt with accordingly; and is, as a rule, manifest in the synovial membrane and fat pad. Fat pad and regional synovectomy is indicated in many cases. In the osteophytic types the removal of the remaining attached osteophytes should rest upon the following considerations: they should be removed only if they interfere with motion, give rise to nerve pain due to pressure, are themselves subject to pressure pain, or when they are on the point of becoming detached. (Fisher believes that these osteophytes are a compensatory effort of the joint to increase its joint margins, and therefore treats them much more conservatively than is really necessary.) The rule that partially detached fragments should always be removed holds true, whatever the underlying pathologic process may be. In osteochondromatosis a complete anterior and posterior synovectomy must be resorted to, particularly when obstructive symptoms predominate. Some authors urge more conservative measures because this is not a malignant disease as was once thought to be the case.

IV. *Treatment of other forms of derangement mentioned:* Rupture of the crucial ligaments deserves emphasis even in this brief discussion. Anatomic suture is usually impracticable because of retraction of the torn ends. (Recently, one author reported a long series of successful suture.) In an effort to imitate the original anatomy of the crucial ligaments, many operations have been devised, based upon the original technic of Hey Groves, in which certain hamstring tendons or fascial strips are drawn through drill holes in the femur and tibia. One such case has been operated upon in this clinic with good results. The final judgment on these procedures is still an unsettled point although the early results are usually very satisfactory. It is rational to assume that the final results depend upon the integrity of the lateral ligaments after such disabilities and not only upon the repair of the crucial ligaments themselves.

The desirability of immediate anatomic reduction of all fractures involving the articular surfaces is obvious. Early mobilization is the other important factor.

Tears of the lateral ligaments are reconstructed with fascial reënforcements or by the utilization of tendinous structures in the immediate vicinity somewhat after the manner of crucial repair; but are less formidable procedures.

Abnormal lateral mobility of the patella may be treated by ligamentous or bone plastic operations, such as medial transference of the tibial tubercle, entirely or in part, or by building up the lateral femoral condyle.

In fractures of the tibial spine, reduction is possible in early cases by operation, but in the older types the removal of the fragment will give better results.

Fusion may be recommended in carefully selected cases of tabetic arthropathy.

CASE STUDIES*

I. *Lesions of the semilunar cartilages.* To date there have been 115 operations for removal of the semilunar cartilages. There have been no true semilunar cartilage cysts observed in this clinic. Injuries of the internal cartilage occurred about fourteen times as frequently as injuries of the external cartilage. Eighty per cent of the end results were excellent and the rest were fair. This compares favorably with over one thousand cases collected from the literature. Of the closed reductions, the results were very good in all early uncomplicated cases, that were sufficiently immobilized.

II. *Osteochondritis dissecans:* Seventeen patients with this condition have been treated in this clinic, of which sixteen were males. Their ages ranged from sixteen to forty-six years, the greatest number being in the second and third decades. Twelve were operated upon, and excellent results noted in about 85 per cent. Two were bilateral, and in four cases, more than one free body was removed. In three cases the fragment was still firmly attached in the typical location. Two were associated with lesions of the semilunar cartilages. One case is of particular interest. At operation a subchondral area of softening was noted. The bone beneath the cartilage was curretted out, and the cartilage replaced. The inevitable loose body appeared sometime later, nevertheless. Included in this classification are two cases in which only the infarct-like areas were noted upon the x-ray films, following a history of trauma.

III. *Osteoarthritic osteophytic loose bodies:* Of the seven cases studied only two were operated upon. Practically all were males, and four were

* Dr. E. M. Cowart tabulated the statistics on cartilage injuries up to November, 1930.

in the sixth decade of life. In all of these cases, the symptoms were primarily referable to the arthritic changes which involved multiple joints in most of them. In the cases operated upon, only one joint was involved, and the mechanical obstructive symptoms justified the removal of the ten bodies which were present in the anterior and posterior compartments of the knee joint. Some of these were attached to the membrane. The bodies were typically multiple in all the cases. The postoperative recovery was uneventful. There were many marginal osteophytic bodies which were firmly attached, and therefore not removed.

IV. *Osteochondromatosis:* One case was operated upon. The patient was a female, aged twenty-five, who complained of pain and stiffness of the involved joint over a period of four years. This condition was progressive, and during the fourteen months previous to her admission to the clinic, she could not fully extend the joint. At operation the entire synovia was studded with the typical bodies, many of which were also free in the joint cavity. A complete anterior and posterior synovectomy was performed several years ago. Her recovery was uneventful. Her condition is good at the present time, in spite of the fact that recent x-ray studies reveal some tendency to recurrence of the bodies.



Figure VII

The anteroposterior views of the case of Pellegrini-Stieda's disease. The medial condylar region of the left femur shows the typical lesion.

V. *Chondromalacia of the patella:* One bilateral case has recently been observed, and operated upon. (To the best of my knowledge there have been no cases reported in the English literature.) The patient was a female, aged twenty-one. The history was of a chronic nature, and dated back to her childhood. The predominating complaints were pain and swelling of the knees, abnormal lateral mobility of the patellae, and dull, aching, arthritic-like discomfort which was made worse on exertion and during changes of weather. Both knees were explored surgically. At operation many rice bodies and several typical joint mice were removed. Most remarkable was the local condition of the patellar articular surfaces. There was a marked extensive cartilaginous ulceration which exposed the bone. This involved at least two-thirds of the entire surface. The cancellous bone beneath was apparently normal. Fragmentation was present in the lower poles, and these were removed for microscopic studies. Secondary moderately advanced changes were also noted in the synovial membrane and fat pads, which were removed. The articular surfaces of the femur and tibia were not remarkable. On the left side, the ulcerated area was not disturbed because the process looked quiescent. Several weeks later the entire articular surface of the patella was removed from the right knee and a piece of synovial membrane sutured in its place. Recovery was uneventful after each operation. The histologic studies will be reported in a later more detailed paper.

Acknowledgment: It is a pleasure to thank Dr. Steindler for permission to report his material, as well as for his kindness in correcting the manuscript. The writer has borrowed freely and even bodily from the writings of Drs. Steindler, Fisher, Phemister, Osgood, Henderson, Campbell, and many others. For the anatomic conceptions he is deeply grateful for the lectures of the late Dr. H. J. Prentiss, and the present head of the department of anatomy, Dr. E. MacEwen.

OBSERVATIONS ON POST-TONSILLECTOMY PATIENTS*

M. J. JOYNT, M.D., Le Mars

A paper on some phase of tonsillectomy is common, but the operation is a frequent one and deserves considerable attention. Complete tonsillectomy has been advocated and practiced for several years. However, our education is not complete and we should always strive to increase our knowledge of the indications and our skill in the technic of tonsillectomy. Indications or technic will not be discussed in this paper.

The operation has been in vogue a sufficient length of time for us to benefit by looking backward. I have often thought that if all the patients on whom we have performed tonsillectomies could pass in review with their mouths open, we would have some horrible nightmares, and we would make some firm resolutions to do better work in every case. On our look backward we will see many, and I hope a large majority, of ideal tonsillectomies. On inspection this ideal throat will

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show both anterior and posterior pillars well formed and lined with mucous membrane with the uvula hanging free in the center. There are no granulations in the tonsillar fossa or the posterior pharynx. In fact we are inspecting a normal appearing throat with the tonsils absent. Subjectively the symptoms are normal, relief is obtained from the complaint for which the work was done and we have a very grateful patient. Unfortunately this is not always true, and in this short paper I will try and point out a few things that are not ideal.

My remarks will be confined to generalizations and I will not cite any specific case histories or statistics. These observations have been made, for the most part, on my own patients, but I offer no special apology for them; only for the work in general. I am sure you can all find very similar cases in your own work.

In order to bring more clearly to mind the faults and defects I have classified them as follows: (1) the faults we see upon inspection of the throat, and (2) subjective symptoms, or the complaints of the patient.

We see patients whose operation upon inspection shows many faults, but who appear well satisfied with the result. On the other hand we see patients whose throats appear to be in good condition, but who have many subjective symptoms. The latter is not the rule, however, as the poor appearing throat and the complaining patient usually go together.

We will discuss first the faults we find upon inspection.

Tonsillotomy. By this I do not mean a poor attempt at removal, but the old style tonsillotomy. We still see a considerable number of these patients. In some it would appear that the tonsils had made a considerable growth and possibly they are actually larger than if they had never been touched. Others show moderate size tonsils with their surfaces even with the free edge of the tonsil pillars and the pillars adherent to the tonsils. While the general appearance of the throat may not be bad this type of tonsil is usually infected and requires complete removal. I might add that it is easily removed and careful work should produce a satisfactory throat.

Circumcision of the tonsil. This type of operation was strongly advocated by an Iowa man some years ago, but was not generally adopted and has now fallen into disuse. I have never seen a patient on whom this operation had been performed and I mention it here only to give someone a chance to describe it in discussion.

Electrocoagulation. This is mentioned for the same reason. I have never tried this operation, never saw it done, nor inspected a throat after it had been done. We must not forget that this operation is being done by physiotherapists, amateur operators and some throat surgeons. It is also highly recommended by one of our health column writers. He gives the impression that it is a very simple procedure and practically 100 per cent efficient. The very nature of the operation could not be so simple. The patient will surely have some sore throat. This condition combined with inconvenience, fear, and the time and expense involved because of the necessary repeated treatments, will leave many incomplete cases, and a repetition of all our troubles from the old tonsillotomy. However, I think we should inform ourselves thoroughly about this procedure. We should learn when it is indicated. The patient should know just how much treatment and what difficulties are encountered. We should either reserve this operation for competent practitioners or hasten its discard.

Tonsillectomy with tonsil fragment in the supratonsillar fossa. This condition is fairly common and is the result of leaving some tonsillar tissue free in the supratonsillar fossa when dissecting the tonsil. In the healing process the pillars incase this area, leaving some tonsillar tissue distinctly buried but still subject to infection. In the dormant state you can usually express some pus from this area and when the infection is acute there is considerable swelling and soreness and frequently abscess formation. Permanent relief is not obtained until the offending piece is removed.

Fragment of tonsil at the base of the tonsillar fossa. This condition results because the dissection is not made low enough before the snare is applied or because the space is filled in by scar contraction pulling the lymph follicles laterally from the base of the tongue into the base of the tonsillar sinus where additional growth takes place. As a rule the pillars are free and while these tonsillar stumps do become infected and require removal they do not cause as much trouble or absorption as do fragments in the supratonsillar space.

Scars and contractions. There is such a variety of these conditions that it is very hard to describe them. In some we see no pillars, in others an anterior pillar or a posterior pillar, or else the two are united to form one. The uvula may be drawn to one side or it may be completely removed. This situation results from lack of care in dissection. Either too much mucous membrane is removed from the pillars or even part of the pillar itself is removed, or else we remove part of the pharyngeal muscle at the base of the tonsillar sinus. Sometimes these throats do not look so bad immediately after operation, but we are often much

surprised at their appearance when we see them some time later.

Unusual dryness of the mucous membrane. When the membrane has undergone an atrophy an unusual dryness of the mucous membrane may be noticed. The throat is dry and glazed and is sometimes covered with a sticky exudate which is very adherent. Reasons for this may be (1) an atrophy caused by a chronic postnasal discharge, often seen in patients who have not had tonsillectomies, or (2) a dryness caused by the scars and contractions previously described. The remedy for all the symptoms mentioned so far is more skillful technic. We should use gentle, careful dissection according to our method of choice. We should remove all the tonsil, but leave the mucous membrane on the free edge and tonsil of both pillars and we should be careful not to cut into the pharyngeal muscle. In this way only can we have a better appearing throat and a more satisfied patient.

Extratonsillar pharyngeal lymphoid tissue in the pharyngeal wall and in the floor of the tonsillar fossa. This is perhaps the most important problem in post-tonsillectomy patients. All our other defects can be remedied to a large extent by improving our technic. Hypertrophy of the lymphoid tissue is compensatory in nature and is not a question of technic.

Dr. V. V. Wood of St Louis[1] has written an extensive article on the clinical consideration of inflammations and infections of extratonsillar pharyngeal lymphoid tissue before and after tonsillectomy and I am going to quote his summary.

"1. Inflammations and infections of extratonsillar pharyngeal lymphoid tissue which has undergone a compensatory hypertrophy after tonsillectomy may be followed by the same focal infection syndromes that are so frequently attributed to tonsils prior to their removal.

"2. Prior to tonsillectomy severe sore throats occasionally occur in which the inflammation is confined to extratonsillar lymphoid tissue of the pharyngeal walls without any apparent involvements of the tonsil proper.

"3. It is often possible to anticipate the amount of postoperative trouble likely to be produced by extratonsillar lymphoid tissue of the pharnyx following tonsillectomy if the entire pharyngeal vault is studied and classified, because patients showing a marked tendency to overdevelopment of this tissue are prone to do badly after the tonsils are removed.

"4. It is possible that infections originating in the nasal sinuses frequently find their way into the blood stream through inflammation of lymphoid tissue of the pharynx, either incited or fostered and fed by a postnasal discharge from the sinuses.

"5. Nasal pathalogic conditions, such as obstructions, sensitizations, and infections play an important rôle in the production of pharyngeal inflammations both before and after tonsillectomy."

The fact that we find extratonsillar lymphoid tissue after tonsillectomy brings to my mind three questions. First, if this is a compensatory effort of nature to replace the tissue we have removed, have we done the right thing in removing the tonsils? Second, if we find a throat with a large extratonsillar lymph follicle extending the whole length of the pillar and evidently infected, and in the same throat we find a similar follicle in the tonsillar fossa, or even what is undoubtedly a part of tonsil not removed, should we advise removal of the material in the tonsillar fossa and leave the extratonsillar tissue which contains just as much or even more infection? Third, how should we treat these cases of extratonsillar lymphoid tissue?

Up to this time I have discussed the general appearance of the throat after tonsillectomy, but after all the supreme test of our work is the patient, and I have listed a few of the more common complaints as follows:

Dry throat. This complaint is just what its name implies, a sense of dryness and a continued desire to clear the throat. It is due to an atrophy of the mucous membrane following a prolonged nasal discharge, or a throat badly scarred and contracted following operation. This is a very disagreeable type of throat to handle. We should do all possible to relieve the nasal condition and stimulate the mucous membrane.

Full throat. A feeling of fullness in the throat is usually the result of adhesions between the lower part of the anterior pillar and the base of the tongue. Since these adhesions are being constantly moved, they will eventually stretch and relief will be obtained after several months.

Repeated attacks of sore throat. Any infection that attacks the throat such as influenza or tonsillitis, very quickly infects the extratonsillar lymphoid tissue. The area becomes red and swollen, and will even have pus exuding from the crypts. Some patients will have all the symptoms of acute tonsillitis, and again some patients will have these symptoms with no apparent pathology in the throat. In the article by Dr. Wood previously quoted he claims that because of the minute size of the follicles gross inspection will not show them to be swollen, but that swelling can easily be demonstrated with a magnifying glass.

No relief from symptoms. This is a rather discouraging part of tonsil work. If the patients have frequent sore throats as stated above they

are not satisfied. If their previous complaint was a heart lesion, rheumatism or any of the ills caused by focal infection and they do not obtain relief, we have not accomplished our purpose or the condition was so far advanced that removing the original cause did not bring the expected relief.

I realize that I have spoken at random on a number of thoughts, any one of which could be the subject for a paper. I have no special recommendations for meeting any of the conditions, other than that every case should have due consideration for the indications and that we should always make an effort to do our very best work.

REFERENCE

Wood, V. V.: Ann. Otol., Rhinol. and Laryngol., xxxvi:511, 1927.

Discussion

Dr. Fred W. Bailey, Cedar Rapids: Dr. Joynt has given us a very concise classification and discussion of observations on post-tonsillar patients. His statement that the tonsil operation still deserves considerable attention is certainly true.

He says that he has had no experience with the tonsil circumcision operation or removal of tonsils by diathermy coagulation. Personally, I tried a number of cases by the circumcision method. I have also seen an occasional case operated elsewhere by this method and I have noted that the tonsils looked as though they had never been disturbed.

Post-tonsillar observations in the diathermy technic surely deserve some consideration at this time. There is a great deal of this work being done. I have installed a diathermy apparatus and have been working on a number of cases myself. I have seen a number of postoperative cases which have been discharged as finished and only in a very few cases has the operation been completed. As Dr. Joynt says, there has been considerable newspaper publicity concerning this method and the public is led to believe that it is a simple procedure, with no danger attached, and that the patient merely walks into the office, has his tonsils coagulated, and walks away without them. This conception of the operation is, of course, absurd. In another year or two, much more data will be available on the postoperative condition of the patient who has had tonsils removed by diathermy.

One subjective symptom not mentioned by the essayist, which has come to my notice several times, is loss of the sense of taste on one side of the tongue. Another is the inability of the patient to protrude the tongue. The former is probably caused by some inflammation or injury of the glossopharyngeal nerve. The latter is due to contraction of scar tissue at the base of the tongue. Scarring and contraction of the throat appear to be due in a measure, to a keloid tendency. These cases usually get no better, but continue to complain.

It has been proved by a survey made in a New York nose and throat hospital that tonsillar or lymphatic tissue was present in at least fifty per cent of five thousand cases observed two years after operation. One rarely sees a tonsillar fossa in which no lymphatic tissue can be found a year or so after the operation. Operators who have just completed their medical training are inclined to criticise adversely almost every postoperative case, in which they find a bit of lymphatic tissue here and there. After they have been operating for a time and have performed several hundred operations of their own, they gradually wake up to the fact that this lymphatic tissue is by no means uncommon, and is usually of no consequence.

It is a common belief among the laity that the removal of tonsils may impair the singing voice. Personally, I have never had a case where a singer's voice was impaired by this operation. Often a voice student who has some fault in the tonal range or quality, has the tonsils removed, expecting this operation to remove the trouble. If the patient is not relieved of his voice difficulty, he blames it on the tonsil operation, and feels as though the operation has injured his voice. An improvement in the quality and a wider range is often noticed in singers after tonsillectomy.

Parents bring their children in for an adenoid and tonsil operation. Occasionally they bring the children back in a year or so and complain because the child has, in the meantime, had a cold and earache and perhaps some one of the contagious diseases. Parents imagine that a child having his tonsils removed should never have anything the matter with him in the way of other infections. This is a postoperative observation which has come to my attention many times.

Dr. Joynt's discussion of the subjective and objective symptoms of this phase of the tonsil operation has been very complete and I have nothing further to add.

THE BLOOD PICTURE AND CERTAIN RELATED CLINICAL IMPLICATIONS

Frederick H. Lamb, M.D., Davenport

(Continued from last month)

CLINICAL HEMATOLOGY

To what extent may the blood picture be of practical service in the recognition of hematopoietic disorders and infectious processes? Frequently the physician does not see the patient with either condition from the very inception of symptoms, so that he must be content with a series of one or more cross sections as it were, composed of history, clinical and technical findings, and sometimes progress, on which to base his diagnosis. In hematopoietic disorders, an analysis of the blood cells may assume the most important place in the cross view; its proper interpretation may amount to a diagnosis, independently of other findings. On the other hand, in infectious diseases, the blood picture merely helps to complete the diagnostic cross section and may be of considerable prognos-

tic value. In either case, the more individualized the picture, the greater will be its value. Just as a composite picture of a number of men would not help in the identification of a certain criminal, so neither will a simple enumeration of red and white cells and hemoglobin estimation aid to any great extent in making a diagnosis.

ANEMIA

Considering first those clinical conditions characterized by a diminution in the number of red cells, what will be the mechanism of the hematopoietic response in replacing the red cells? What regenerative principles will come into action, and what will be the sequence of events? Following vasomotor and respiratory readjustments, there will be an increase in the amount of hemoglobin per cell even while the red count is falling. This increase is due to an overabundance of hemoglobin in the normoblastic reserve. Second there will be an increase in the number of young reticulated red cells, the abnormal demand resulting in delivery of less mature forms—a "shift to the left" in the red cells. Third, normoblasts will appear in the circulation, frequently in showers, indicating a periodicity of delivery. Fourth, the hemoglobin content per cell will fall resulting in achromia and a low color index. Several other changes will be noted in the peripheral blood: polychromaphilia, indicating various amounts of basophilic substance; punctate basophilia, denoting an abnormal precipitation of basophilic granules; anisocytosis and poikilocytosis, changes in size and shape respectively of the red cells, and reflecting the severity of the strain in the blood forming organs. The sedimentation rate will be influenced, and the icteric index changed. Under extreme duress, megaloblasts may appear in the blood, indicating the maximum effort in erythropoiesis. The foregoing sequence of events applies, in a general way, to all anemias, more particularly to the secondary group following hemorrhage, hemolyzing agents or other demands, but assuming a responsive blood forming system.

Into a separate category may be placed those anemias, which are unaccompanied by an immature red cell response, (reticulocytes, "shift to the left") and which are secondary to a toxic depression of the hematopoietic system, or an exhaustion phase following long continued hyperactivity.[29]

As further emphasizing the specificity of pathology underlying various types of secondary anemia, it should be mentioned that where there is a reduction in the available supply of elements from which hemoglobin is synthesized,[30, 31, 32] three to eight grams of ferrous carbonate or iron ammonium citrate given daily will be followed within forty-eight hours by a reticulocyte response identical with that found after five to seven days on liver feeding in primary anemia. This difference in time probably bears out the observation that in secondary anemia, the majority of cells in the bone-marrow reserve is at the normoblastic level of maturation with full maturity near at hand, while in the hyperplastic marrow of pernicious anemia, the bulk of cells are at the megaloblastic level requiring more time for delivery.[2] In the secondary anemia, iron (with minute quantities of certain other metals, notably in the nutritional deficiencies of infancy) is operative at one level of maturation, while in pernicious anemia, the liver fraction is operative at another level in erythropoiesis. The anemia accompanying scurvy, has recently been shown to be capable of a marked reticulocyte response, and red cell regeneration following a high vitamin C diet, when both liver and iron have been ineffective. Thus, the objective in a new type of hematologic research is illustrated; that is, the finding of specific substances, operative at specific levels in generation and delivery of blood cells, for specific purposes. Note how much depends on a knowledge of the life cycle of the individual cell, all phases of which must be integrated for normal equilibrium.

In primary pernicious anemia of the Addison-Biermer type, the bone-marrow is decidedly hyperplastic, and filled with megaloblasts,[33] hypothetically lacking the maturation factor to complete their development.[13] The characteristics of the peripheral blood are too well known to need enumeration here. The average size of the red cells is decidedly increased, accounting for the high color index. The individual cell is not overloaded with hemoglobin, nor is the hemoglobin more concentrated; its increased complement is less if anything in proportion to its increased size than in the normal cell, due to the retardation of the megaloblast to synthesize hemoglobin. As a practical matter, it should be remembered that the severe secondary anemias of sprue, hypothyroidism, dibothriocephalus latus infestious and gastric carcinoma have been mistaken for pernicious anemia, and that bone-marrow examinations may, at times, be desirable for differential diagnosis.

In partial and complete aplastic anemias, we have still another peripheral blood picture, and albeit, a tragic situation in blood forming structures. There is a failure to initiate the formation even of the stem cells from which the red and white cells and blood platelets develop. The proportion of fatty marrow to red marrow increases to the vanishing point of the latter.

The writer has had the opportunity within a

year to observe both a rapidly fatal case in a man of fifty and a less rapidly progressive case in a girl aged twelve. The sequence of clinical events, in the latter case, was interesting and just a bit too uncanny to watch. First, came the period of pallor and breathlessness on exertion accompanied by a blood picture of secondary anemia, with a color index close to 1. This stage lasted approximately one month. Next came a period of marked weakness, increasing pallor, dyspnea without exertion, and a still lower red count and hemoglobin, but with only a moderate diminution in white cells. At the end of ten days, a third period was ushered in by the appearance of bleeding gingivae, soon followed by frank hemorrhages from buccal and nasopharyngeal mucosae. A fourth period, which soon followed, added infection and necrosis, not only to the oral but the vaginal and rectal mucosae as well. The last two stages were modified by seven 600 to 900 c.c. transfusions of whole blood, the temporary influence of each of which was notable. Nevertheless, there was a continual downward trend in the number of red cells. Of the white cell series, first the granulocytes diminished to the point of complete disappearance, followed later by lymphocytes so that the actual white count was forty cells. The blood platelets which had fallen rapidly from the first count, crossed the line at which symptomatic purpura developed just before the disappearance of the last ten per cent of the granulocytes. The entire course of the disease as estimated from the onset of clinical symptoms was three months, the last three weeks of which were modified by the beneficial effect of massive blood transfusions (a total of 5200 c.c. of whole blood in a period of 24 days.)

The use of fetal liver extracts in hypoplastic states is suggested from Berglund's clinic, [34, 35] in the hope that therein might be found a concentration of hematopoietic factors, has been but little, if any more effective than extracts of an adult liver. A recent demonstration has revealed the fact that an erythropoietic hormone in normal gastric juice (Morris, et al.) is more active than the liver fraction.[36]

POLYCYTHEMIA VERA

In contrast to the group of hypoplastic anemias, characterized by a depression of formation of blood cells, or a restraint in maturation and delivery, we see the opposite condition in polycythemia vera, a condition characterized by increased proliferation of all the marrow elements.[36A, 38] There is a widespread conversion of fatty to red marrow with enormous numbers of mature erythrocytes and normoblasts, but only rarely a megaloblast. Thus, the condition differs materially from primary anemia with its megaloblastic predominance and secondary anemia with excessive normoblasts. In fact it differs from the condition found in experimental plethora in animals where, with repeated transfusions, the total red count is maintained at a high level, with a consequent decrease in marrow activity because of the limited need for auto-erythropoiesis.[15] The use of phenylhydrazin seems to provide only symptomatic relief through its hemolytic action, and in no way gives promise of correcting an underlying fault in the mechanism of oversupply of red cells. (It is noteworthy to contrast this type of action with that of the therapeutic measures heretofore referred to in erythropoiesis.)

Blood transfusion, while not in the category of specific remedies, frequently serves a double function; first as a life-saving replacement of blood lost; second, as a means of supporting the hematopoietic system through an emergency, thus indirectly stimulating red cell regeneration. On the basis of sustaining this vital function through threatening toxemias, blood transfusion deserves a high rating among intelligent prophylactic measures.

In addition to the previously mentioned functions, the writer has had the gratifying experience of seeing a patient in a morbid condition following illuminating gas poisoning, restored to health through a combination of venesection and massive transfusion. The new red cells, with full capacity for transporting oxyhemoglobin turned the tide against the serious anoxemia, due to the fact that the patient's own cells were so filled with the stable combination of methemoglobin, that there was a limited capacity for the vitally necessary oxyhemoglobin.

For the present discussion of the red cell picture, it will suffice to have certain clinical manifestations of disease correlated with red cell generation and development; to have considered both from a standpoint of evolution, that is, to associate the sequence of clinical observations with the life cycle of the erythrocyte or vice versa.

LEUKOPOIETIC DISORDERS

Granulocytes

In a like manner, it is possible to consider in two separate groups, those conditions in which the white blood cells are affected chiefly and primarily, (but not altogether independently of the red cells and platelets). Sufficiently disorganized hemopoiesis, as applied to the generation and development of leukocytes, culminates in the conditions recognized clinically as leukemia. Remembering the evolution of the granulocyte from reticular cells through the stages of primitive free cell mega-

loblast, myeloblast, myelocyte, and metamyelocyte, it is not difficult to trace the mechanism of origin of myelogenous leukemia. A preponderance of one type of cell over another in different cases, or at different periods in the same case, may be readily understood. Improvement in hematologic technic gives promise of finer discrimination in the therapeutic use of radiation (in which reliance on the total leukocyte count alone leaves much to be desired). The trend, progress, and prognosis may be more accurately appraised.

Lymphocytes

In the light of Weisman's[27] recent studies, the lymphocytic series, and the mechanism of origin of lymphocytic leukemia and aleukemic leukemia may be depicted. The acuteness and severity of the process may be estimated by the degree to which lymphoblasts dominate the peripheral blood picture.

In both myelogenous and lymphocytic leukemia, there seems to be no lack of stimulus to white blood cell formation. On the contrary, it is probably accentuated aimlessly, and beyond the bounds of normal histogenesis. However, an equally apparent factor is a loss or failure of the power of maturation. Figuratively speaking, adolescence, maturity and senescence are never reached, and the folly of perpetual youth becomes quite real.

Monocytes

So far as the writer is aware, there is no condition recognized clinically, in which the monocytes so completely and primarily dominate the peripheral blood picture as in the case of the myeloblastic and lymphoblastic series in the leukemias. (On theoretical grounds alone, such a condition might be expected.) A monoblastic stage is recognized as preceding the mature monocyte. In fact, a life cycle, somewhat more complicated than that of other white cells because it retains the power of division in the circulation, is recognized.[2] In the case observed by Doan, previously referred to, an independent control mechanism is suggested by the periodic fluctuation in the number of circulating monocytes. Incidentally, this periodicity in itself, as intimated before, is one of the criteria which helps to establish the separate identity of all blood cells. Nevertheless, the monocyte and its functionally related clasmatocyte are not without significance in blood analysis. They will be dealt with in a more logical way later.

Summarizing the group of hematopoietic disorders influencing the white blood cell picture chiefly, much is known, yet very little understood. It is the old story of ignorance of the ultimate cause.

LEUKOCYTIC REACTIONS TO INFECTION

Granulocytes

Turning to that group of infectious processes where exact etiology is the very basis of our knowledge, the coordination of clinical data and the peripheral blood picture has been interesting to say the least.

The clinician who is accustomed to think only in terms of the total number of leukocytes will be disappointed less frequently, if he will keep in mind the normal individual fluctuation of the leukocytic response occuring in diurnal tides, and amounting to as much as 100 per cent. Not only are there hourly fluctuations in addition, maintained to some extent during a high leukocytosis, but it is also well known that in certain diseases there is rapid diapedesis of granulocytes from the blood, as it passes through the diseased organ or tissue. This is especially true in the early stages of pneumonia, also of acute surgical conditions within the abdomen.[37] The practical lesson for those who wish to go no farther in individualizing the blood picture, is that if the initial total count does not fit into the clinical setup, the count should be repeated within an hour and again in twelve to twenty-four hours. Dependence on the total count alone also presupposes the "textbook" normal in responsive bone-marrow, which is not always true. The specific character of a leukocytic response can be appraised only by an examination of the blood film. It is necessary first to study and classify the nuclear patterns after the well known manner of Arneth and Schilling. In this connection, it is important that certain criteria in the analysis and recognition of nuclear patterns be established and adhered to, especially where the reports of more than one examiner are being correlated. The maximum of simplicity is desired. It can be approached by using Wright's stain, and accepting the presence or absence of filament-like processes of nuclear matter as a criterion in distinguishing mature and immature cells; or by the presence or absence of nucleolar masses of chromatin in the recognition of still younger cells. The specific nature of the neutrophil response with a "shift to the left" in nuclear patterns is well known and in keeping with other specific reactions in hematopoiesis.

It is generally believed that progress is good so long as a leukocytic response is made up of relatively mature cells, with only a "shift to the left" in nuclear structures as a qualitative indication of the pathologic progress. If, however, immature metamyelocytes, or leukocytes with an incomplete complement of granules appear, it is evidence of marked toxicity and a seriously disordered myeloid

response.[2] Carried to its ultimate extreme, the shift to a myeloid or leukemoid reaction dominates the picture, with clinical disaster impending.

In considering the prognostic value of the nuclear shift, one must exercise due caution, for the simple reason that many other factors, aside from granulopoiesis of the disease in question, enter into the matter of life and death. Illustrating this thought, the writer recently saw a satisfactory regression in the blood picture of a ten-year-old child following operation for purulent mastoiditis. An initial total white count of 15,700 with 17 per cent immature nuclear patterns had gradually fallen to 12,200 with 6 per cent immature forms. Clinical recovery to this point had been fairly good. Rather suddenly on the ninth postoperative day, the child complained of headache and stiff neck. A purulent spinal fluid obtained the next day contained encapsulated streptococci. The leukocytic response at this time showed a total of 77,700 (an increase of 650 per cent in three days) with 42 per cent immature forms (an increase of 700 per cent), reflecting a very responsive marrow, had there been any question on that score. Precisely what had happened is not known. Assuming that a pinhead to pea-sized abscess or a circumscribed lymphangitis was located in such a way as to inoculate the leptomeninges, one may readily see the importance of the mechanical factor of location of pathology, and the vital capacity of the organ involved to withstand inflammation. Had the same residuum of infection been located in such a way as to infect the pleura, a pleurisy with effusion, or thoracic empyema is about the worst complication that might have happened, yet this is far less likely to be fatal than meningitis. The organ or system involved must be reckoned with in all prognoses. Moreover, no agency is known of sufficient prognostic value to indicate when or where some complication of a primary process will take place.

It is more than likely that chemical factors enter into the mechanism of leukocytosis. It is generally believed that pyogenic organisms, for example, introduce a chemotactic and maturation factor, resulting in a sustained increase in the white cell count, whereas the typhoid bacillus, as exemplifying the group of leukopenic reactions, introduces the chemotactic element alone.

The essential aplasias are conceived as lacking an initial stimulus to differentiation in the stem cell, a repression of cell proliferation. Malignant neutropenia (agranulocytic angina) is the best known of the clinical syndromes arising on this basis. On theoretical grounds, the remedy for this condition will have to be some agent which will neutralize or remove the factor which is specifically depressant to granulopoiesis. (Specific hematologic therapy has for its field the separation and identity of such stimuli and agencies. Bacterial chemistry, vitamins, dietary factors, and organ extracts are now being studied with this end in view.)

Lymphocytes

The response of the lymphocytes to infectious processes is illustrated in the relative and absolute lymphocytosis in pertussis. Data are being accumulated on the lymphocytic reaction in certain virus diseases, notably yellow fever. The various lymphadenopathies may or may not be represented by changes in the peripheral blood. So far as the writer is aware, no comprehensive survey of this association has been made, although individual studies have been reported tending to link the fixed lymphocytic tissue changes and circulating blood cells.

Monocytes

Monocytic responses on a numerical scale comparable with granulocytes and lymphocytes are rare. From the case report by Doan[2] such a reaction is known. It is also known that there are periodic fluctuations (hourly) tending to establish the factors of independent control. The "shift to the left" with increased percentages of younger forms has been noted. A persistent monocytosis has been observed in undulant fever. Sabin and her associates have shown that the epitheloid cell of the tubercle is a pathologic modification of the monocyte. It has been shown that living tubercle bacilli and certain chemical functions thereof, may stimulate the local formation of monocytes followed by an epitheloid metamorphosis.[6, 38, 39] Coincident with this proliferation, there is an overflow into the circulation of monocytes which are found in all stages of transition from mature monocyte to epitheloid cell.

Combined Granulo-Lympho-Monocytic Reactions

In most pyogenic infections, it has been observed repeatedly that there is an orderly sequence of responses on the part of the granulocytes, lymphocytes, and mononuclears. This sequence is probably not in the nature of a coordination of control, but rather a coincidence; that is, during the stadium incrementi and fastigium of a pyogenic infection, a granulocytic response is initiated and maintained; during the stadium decrementi there is a transitory rise of monocytes, lasting two to four days (particularly noticeable immediately following the crisis in lobar pneumonia). Then a postinfective lymphocytosis supervenes, provided resolution of the process be uneventful. So regularly does this transpire, that a persistent increase of

monocytes, and a delayed lymphocytosis, may be taken as a warning either of disordered resolution[4] or of impending complications, the severity of which are closely linked with the organ or tissue involved. When resolution of the infective process has been satisfactory, and possibly heralding the establishment of some degree of immunity, the eosinophiles—the most colorful of the leukocytes, which have been conspicuously absent during the fray—dramatically reappear in the peripheral picture, much as a flag might be raised to mark the end of a journey. The consistency with which this procession of events takes place is striking, indeed, but the wise clinician will always be wary of placing undue reliance on any one agency.

To illustrate: It will be recalled that the amount of red active bone-marrow is proportionately increased in childhood.[2] The supply of erythroid and myeloid cells is greatly increased. Therefore, with reference to grave prognosis, the appearance of immature cells in the circulation has a decreasing significance, the younger the individual in which they are found. In infancy, a slight disturbance may be reflected by a high white count, and an immature cell increase of alarming portent if the underlying mechanism of hematopoiesis be not kept in mind.

CONCLUSIONS

It has been the writer's purpose to present a connected integrated account of the blood picture from a practical standpoint, Its basis has been the physiology of the hematopoietic system and certain well known pathologic deviations. The peripheral circulation has been conceived as an extension and expression of the activities of the blood forming organs and as a medium of exchange. Inferences and deductions from the peripheral blood picture have been made and illustrated from a standpoint of clinical utility, always to be assimilated with discrimination.

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Case Report

REGIONAL CHRONIC ULCERATIVE COLITIS*

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Approximately ninety per cent of patients with chronic ulcerative colitis present themselves with primarily medical problems. There are two major indications for surgical intervention in this disease: (1) complications; that is, polyposis, stricture, perirectal and abdominal fistula, and occasionally malignant disease, and (2) involvement of a localized segment of colon.

The purpose of any surgical maneuver in chronic ulcerative colitis is to give functional rest to the involved segment. In the case of complications, this is best accomplished by some form of drainage applied above the portion of bowel involved by the disease, and in our experience, ileostomy is the only reasonably satisfactory measure for this purpose. Short-circuiting procedures may be indicated in five to six per cent of cases in which segments of the large intestine above the rectum and sigmoid are involved. The operation must be individualized, and always must be selected according to the situation of the involved segment. Hence, colocolostomy and ileocolostomy may find their indications. Since the localized region of disease in the majority of cases is in the right portion of the colon, and in the transverse colon, end-to-side ileosigmoidostomy has proved the operation of choice for this group of patients.

REPORT OF CASE

A Jewish youth, aged twenty years, came to The Mayo Clinic, December 1, 1931. He gave a history of abdominal cramps and diarrhea, with ten to twelve stools in twenty-four hours. The disorder was of two years' duration. There had been periods of fever, and in the six months before his admission, the patient had lost 30 pounds. About a year before admission he had made some improvement. However, at that time abdominal cramps had developed. Moreover, a "lump" had appeared in the right lower portion of the abdomen. This had increased in size until it had been drained, when a large amount of pus and a little blood had escaped. A fecal fistula had been present for eight months, from which there was a profuse liquid and purulent discharge which saturated large dressings between four and fifteen times a day. The pain in the right side of the abdomen was severe, and on admission the patient was taking between six and nine grains (0.4 and 0.6 gm.) of codein daily.

The patient's height was 5 feet, 8½ inches (173 cm.). His normal weight was 155 pounds (70 kg.) but his weight on admission was 103 pounds (47 kg.). There was a mid-abdominal fecal fistula and an anal fistula. His condition was serious and demanded immediate hospitalization.

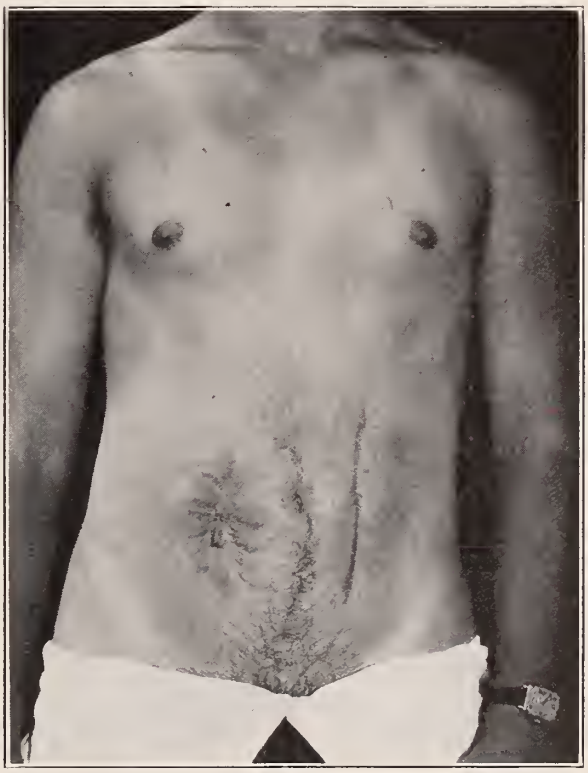


Fig. 1. Appearance of patient's trunk and arms nearly nine months after operation. He weighed 180 pounds and the abdominal fecal fistula had closed.

Repeated examinations of stool failed to reveal parasites or ova, but the diplostreptococcus of chronic ulcerative colitis was isolated from the rectal discharge. The rectal and sigmoidal mucous membrane appeared normal. The roentgenogram of the thorax did not give evidence of any disease or scarring of disease, but that of the colon gave evidence of an extensive granulomatous lesion involving 5 to 8 inches (13 to 20 cm.) of the terminal portion of the ileum, the cecum, the ascending and the transverse colon. The value for hemoglobin was 67 per cent. In each cubic millimeter of blood, erythrocytes numbered 4,210,000 and leukocytes,

*Read before the Scott County Medical Society, Davenport, October 5, 1932.

11,900, of which eighty-five per cent were polymorphonuclear neutrophils.

The patient did not respond to the usual treatment with specific antibody solution (concentrated serum) and December 4, 1931, curettement of the abdominal fistula revealed only chronic inflammatory tissue. January 8, 1932, end-to-side ileosigmoidostomy was performed. The gross appearance of the lesion was typical of chronic ulcerative colitis. It involved fifteen inches (37 cm.) of ileum, and the ascending and transverse portions of the colon, as well as the splenic flexure.

Improvement was striking, and the patient reported on June 20, 1932, with continued good health. His weight had increased to 168 pounds (76 kg.). Throughout the interval since his operation he had been given subcutaneous injections of vaccine prepared from the diplostreptococcus isolated from his rectal ulcers. When the report of his continued good health was received administration of vaccine was discontinued. He reported for observation in September, 1932, at which time his weight was 180 pounds (81 kg.) and he felt perfectly well. The anal fistula was repaired at this time. The abdominal fecal fistula had entirely healed (fig. 1); final closure had occurred in June, 1932.

COMMENT

By this surgical operation the large intestine proximal to the sigmoid, and the involved terminal portion of the ileum were removed from the fecal current. The question might justly be asked as to what effect this will have on the patient's health and well-being. He has gained 77 pounds (35 kg.) since the operation and makes no complaints of ill health. He found, nine months after the operation, that he had to limit slightly his intake of fluid, confine his vegetables to those of relatively low residue, and in general avoid laxative foods. With these simple precautions he averages two to three intestinal movements a day.

The case is a striking illustration of the benefits to be received from combined medical and surgical care in localized ulcerative colitis.

WARNING

The Council on Medical Education and Hospitals of the American Medical Association has recently sent the following notice to superintendents of hospitals registered by the American Medical Association, and to presidents or executive officers of the Colleges of Arts and Sciences and junior colleges approved by the American Medical Association:

"There is being widely distributed an announcement of the Illinois College of Physicians and Surgeons, 20 North Ashland Boulevard, Chicago, which includes the following statement: Courses offered and requirements for graduation are class "A" requirements.

"Inasmuch as the Council on Medical Education and Hospitals of the American Medical Association is the only body which has ever rated medical schools as class "A," it is clearly implied that the above named school conforms to the standards prescribed by this Council. Such an inference, however, is wholly unwarranted. The above institution is conducted by a group of chiropractors and does not even remotely approach the standards of a class "A" medical school.

"You are apprised of these facts in order that you may intelligently advise those of your students who may be about to choose medicine as a career."

(Signed) WILLIAM D. CUTTER.

THE ETIOLOGY OF TUBERCULOSIS

Commemorating the fiftieth anniversary of the discovery of the tubercle bacillus by Dr. Robert Koch of Germany, the National Tuberculosis Association issued an English translation of his original report last spring. This report entitled "The Aetiology of Tuberculosis" was first published in the *Berliner Klinische Wochenschrift* in 1882 and has been translated by Dr. and Mrs. Max Pinner with a scholarly introduction by Dr. Allen K. Krause.

A limited number of this anniversary book is still available and may be purchased from the National Tuberculosis Association, 450 Seventh Avenue, New York City, at fifty cents a copy. The booklet has a green fabricoid cover, is attractively printed, illustrated, and contains forty-eight pages.

DR. BURDICK, PRESIDENT OF ABBOTT LABORATORIES, DIES

Dr. Alfred S. Burdick, president of the Abbott Laboratories of North Chicago, Illinois, died Saturday, February 11, of pneumonia, at the age of 66 years.

Dr. Burdick was elected president of the Abbott Laboratories in 1921, and has served this institution continuously in that capacity since that time. He was to a large measure responsible for the development of the company during the past decade, and consummated its consolidation with the Swan-Myers Company of Indianapolis. Under his executive guidance the company has expanded into its new laboratories, and now is ranked among the leading pharmaceutical houses in the United States.

Due to the wise policy adopted by Dr. Burdick, competent executives and well trained professional men in the organization will continue the progressive policies adopted by Dr. Burdick.

State Health Commissioner's Page

D. C. Strickland, M.D.

REPORTING OF INFECTIOUS DISEASE

Whooping cough, often classed as an infectious disease of minor consequence, caused 51 deaths among Iowa children in 1932. This number is considerably in excess of the 43 deaths from typhoid fever during the past year, and represents more than half again as many as the 33 deaths attributed to scarlet fever for the same period.

The reporting of cases of whooping cough for 1932, was more incomplete in proportion to the number of deaths, than was true of any of the other communicable conditions, with the exception of tuberculosis. Whooping cough cases were reported as being 765, making a ratio of 15 cases per death. The minimum ratio, determined through surveys conducted by the United States Public Health Service, is 26 cases per death. Multiplying 51 (the number of pertussis deaths) by 26, it is found that 1,326 cases of whooping cough should have been recorded for 1932, or nearly twice the number actually reported, which was 765.

The State Department of Health is dependent upon the sympathetic collaboration of physicians throughout the state, in the forwarding of reports of the various infectious diseases. Some physicians, busy with other important matters, are inclined to overlook the reporting of contagion; many on the other hand promptly report every case so that the central health office is always accurately informed regarding disease incidence in various communities of the state. How much more satisfactory from the standpoint of economy, is prompt reporting by those who are in a position to know the facts, than to give attention to rumors, or to indirect reports, or to unofficial, and at times exaggerated, statements which appear in the local papers!

It is the purpose of the State Department of Health to simplify as much as possible the system of reporting so as to require a minimum amount of time and effort on the part of physicians and local health officers. It was suggested by one physician at a recent meeting of the State Board of Health that all physicians be provided with a book of report forms, so arranged that at one writing the report would be made out in triplicate, the original to be sent direct to the State Department of Health, one copy to go to the local health officer or clerk of the local board of health, and one to be retained by the physician for his own records. Such a method would establish a closer relationship between the State Department of Health and the physician reporting the case, which is highly desirable, and would also facilitate the forwarding of all reports to the office of the State Department of Health, where careful study is made of each and every report.

The State Department of Health solicits replies to the following questions, in the form of suggestions or criticisms:

(1) Is the present system of reporting, through the use of franked, report cards, satisfactory?

(2) Is it more satisfactory for the local health officer to keep a permanent record book, containing information relative to all cases of infectious disease, or might such a permanent record best be kept by the clerk of the local board of health, by the township clerk or in the office of the town or city clerk, as has been the practice in some cities?

(3) Do you think that the use of books containing report blanks to be made out in triplicate, as above outlined, would improve the present system of reporting?

(4) Do you have other suggestions?

Control measures are becoming available for an increasing number of the infectious diseases. Immunization treatments are assuming an evergrowing place in private practice. Such preventive measures protect the many and thereby lessen illness among the few. More complete reporting is a basic requirement for the effective control and prevention of infectious diseases.

PREVALENCE OF DISEASE

	Jan., 1933	Dec., 1932	Jan., 1932	Most Cases Reported From
Diphtheria	62	90	92	Polk
Scarlet Fever	142	185	227	Polk, Clayton
Typhoid Fever	7	2	4	Boone
Smallpox	88	155	269	Dubuque, Emmet
Measles	10	8	14	(For State)
Whooping Cough	34	32	108	Woodbury, Boone
Cerebrospinal Meningitis	19	4	2	Polk, Woodbury
Chickenpox	204	452	267	Dubuque, Woodbury
Mumps	129	85	46	Black Hawk, Cerro Gordo
Poliomyelitis	0	2	1	(For State)
Tuberculosis	26	25	26	(For State)
Undulant Fever	5	4	7	(For State)
Syphilis	158	149	179	(For State)
Gonnorhea	170	186	253	(For State)

The JOURNAL of the Iowa State Medical Society
ISSUED MONTHLY

RALPH R. SIMMONS, Editor.....Des Moines

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THE RADIO AND THE CHILD

Many things enter into the development of the child's nervous system, some of them hereditary, reaching back into the dim past, and others related to the environment in which his development takes place. All of these factors can profoundly influence his mental growth. Human mating persists on a basis of sentiment, and consequently does not lend itself to planned improvement in heredity. Like the weather we discuss it and damn it, but so far we have been able to do nothing about it.

Environment, on the other hand, can to a very large extent, be determined and controlled at will. To create a proper atmosphere for the mental growth of the child it is equally important that we recognize on a scientific basis the factors which are conducive to normal mental and nervous development, as well as those factors of environment which degrade and weaken mental stamina.

That unique and interesting wizard of the plant kingdom, Luther Burbank, offered in one of his publications a sound background for a technical discussion of the mind problems of the growing child. He said, "Every child should have mud pies, grasshoppers, water bugs, tadpoles, frogs, mud turtles, elderberries, wild strawberries, acorns, chestnuts, trees to climb, brooks to wade in, water lilies, wood chucks, bats, bees, butterflies, various animals to pet, hayfields, pine cones, rocks to roll, sand snakes, huckleberries and hornets, and any child who has been deprived of these has been deprived of the best part of his education." Not a don't, a preachment, a calory, a vitamin, a selected story book, or a radio hour in the entire list. Yet it has been observed by a competent pediatrician that the quoted paragraph is "as deeply scientific as any Burbank ever made." Did Burbank fail to include motion pictures and the radio in his chronicle of wholesome environment for a child solely for the reason that they had not reached their present high degree of perfection at the time of his writing? While this observation may be partly true, one seriously questions whether Burbank, had he lived at the present time, would have included these modern means of child and adult entertainment in his essential list. It is apparent to all that these wonders of the present age, reaching the brain and consciousness of the individual through his two most vital senses, can be and often are outstanding in their beneficial contribution to human education and entertainment. Both the cinema and the radio are open to just condemnation, however, when these mediums are commercialized without thought or regard to the perniciousness of their effect upon their audience. In each instance the program is bought largely as a pig in the poke, and while it is true that the cinema observer may leave the theater if the production is objectionable, and the radio listener may tune out an undesired program, the most susceptible of the audience in either case, namely children and adults with child-like minds, are not competent to make this selection. Observations are not wanting in any community of the unfitness of the average motion picture production in developing a sound mental and moral balance in the child's development. Based upon these observations parents have been and are roundly condemned for sending their children to the movies "to keep them out of mischief."

Apparently an equally pernicious factor in the mental hygiene of the child has been introduced into radio entertainment by shrewd but ignorant or heedless manufacturers who employ the radio for sales promotion. These manufacturers, particularly those of cereals, attempt to appeal directly to their customers, the children, by filling the air just before the average child's bed-time with stories of horror, murder, robbery, counterfeiters, ghosts and spirits. They have chosen stories of great emotional appeal, appreciating that such stories will fix and hold the child's attention more certainly than less harrowing tales. They have gone the old southern negro mammy one better and have introduced every-day believable characters into their stories, whereas the mammy resorted for her characters upon the outcasts of fairyland. That they have succeeded very well in catching the ears of the children is testified by the increased sales reported by these manufacturers; but what has happened to the child? His impressionable mind accepts as real the story he hears, and he lives with the characters in the awe-inspiring and harrowing situations of the drama enacted. The more emotional the child, the more closely he follows the terrible escapades of these radio vil-

lians and child heroes. Unlike the adult he has not yet learned to sit back as an audience and view the stage, but is transported into the midst of the players. His experience with the theater is usually too insufficient to protect him from the wiles of the actor. His highly active and imaginative mind follows each detail as the actor lives his gruesome tale. The child's mind retains the story as an experience, to be lived over in his play or in some modification in his future adjustment to society. The immediate impressions created by these stories register themselves in fears, causing night terrors, sleeplessness, worries and fatigue, which fill the little child's mind and cause serious upsets in his mental hygiene.

Only recently in a home of an acquaintance, medical aid was summoned because the child of the home had developed night terrors, sleeplessness, crying out in the night, with resulting loss of appetite, nervous fatigue, and listlessness during the day. Not until the child reënacted in his sleep certain scenes which the parents had heard in a radio broadcast to which the child had listened at bedtime, was the reason apparent for the change in the child's behavior. The parents well remembered the eagerness with which the child anticipated the children's hour of radio programs immediately before the evening meal. They recalled his tense little figure as he crouched eagerly before the radio, absorbing every word of what appeared to them to be an innocent, though silly, ghost story. They recalled how his face flushed with excitement as the counterfeiter was caught by the youthful hero of the story and turned over to the avenging police! How the muscles of his body worked convulsively as the eerie ghost in his night setting of storm and howling gales popped up in unexpected quarters and at unexpected times! Little wonder that these profound impressions should have manifested themselves in night terrors. One might dismiss this incident with the comment that this extreme behavior denoted a highly emotional child. It is true that this child was emotional, but all children are emotional to some extent. It is the attribute of childhood to experience the emotions in their fullest, since their immature experience does not dampen or temper the stimulus. Would we tolerate a nurse maid in our home who told our children bedtime stories which curdled their blood and filled their little minds with the sordidness of crime? You know and I know that we would discharge her on the spot.

As physicians we should be alert to this problem. Tonics and vitamins and sun-rays will not erase gruesome images impressed upon a child's mind. Medicines will not restore the appetite lost through nerve fatigue and exhaustion. The radio itself is not to be condemned, but certainly those heedless or uninformed manufacturers who promote sales at the sacrifice of the mental stamina of the children in our homes should not escape open condemnation. They can and they should have the wisdom and experience of science to guide them in the type of programs which they may with propriety offer.

PHYSICIANS AND TESTIMONIALS

When one stops to ponder he is amazed at the gullibility of physicians, not only in the purchase of blue sky stocks, trick office equipment and sure-fire collection schemes, but he appears particularly susceptible to the promoter wishing to secure professional testimonials. Prize-fighters, baseball players, and movie actors are more prolific in testimonials than the proverbial pig is with young. But they are paid and paid well for their testimonials. What did the several thousand physicians scattered throughout the United States receive for the testimonials they gave a certain cigarette manufacturer regarding the mildness and freedom from throat irritation of their particular cigarette? To my knowledge they each received free fifty or a hundred cigarettes of this particular brand. One would certainly doubt the business acumen of these physicians. If testify they must, why did they not make it worth their while? And again, if testify they must, why did they not testify about something concerning which they had definite and concrete knowledge rather than merely an impression?

A later campaign was carried on by a manufacturer of a popular dentifrice, in which physicians in return for a generous sample of the product were requested to declare that this particular dentifrice possessed superior qualities in whitening the teeth and removing dental film. Apparently thousands of busy physicians found time to make this endorsement.

Have you been approached yet with the latest pseudoscientific investigation conducted among physicians to promote the product of a progressive manufacturer? This time it is toilet paper, and I presume the reward to the physician will be a sample of the product. Here is the sort of questions the physician is supposed to answer:

1. Does experience show that injury to the mucous membrane has been caused by inferior toilet paper?

2. What characteristics in the paper itself would be responsible for these troubles?

3. What quality do you as a physician consider most desirable in toilet paper?

It would have seemed far more appropriate had this manufacturer submitted this questionnaire to research chemists and awarded them a retainer fee to begin their researches. What physician can do more than guess at the characteristics in the paper itself which would be responsible for injury to the rectal mucous membrane? We venture to predict, however, that many physicians scattered throughout the United States will feel the urge either of asserting their ego by attempting to answer this questionnaire, or will be prompted by the generous samples offered by the manufacturer to provide him with "high grade scientific data." If there is any one sillier than the man who attempts to provide such pseudoscientific testimonials, it is perhaps the man who reads and believes them.

LAW ENFORCEMENT IN IOWA

It has been only within the last three years that Iowa has had adequate means with which to enforce the laws respecting the practice of medicine. To be sure, we have had, for many years, laws regulating the practice of the different healing arts, such as Medicine and Surgery, Osteopathy and Chiropractic, but the Iowa Department of Health had employed no inspectors, such as other states had, to make thorough investigations of violations.

So many complaints alleging violations had been received by the Department of Health from all parts of the state that the Forty-third General Assembly convening in 1929 was requested to assist in remedying the situation by passing a law providing for a division of law enforcement to be attached to the State Department of Health. The law was passed and became operative July 4, 1929. To rid this state of all its quack doctors, to settle unwarranted complaints against legitimate practitioners of eight professions without injury to their professional reputations and to remove unscrupulous practitioners from practice was indeed a large order for one man to handle. When the Forty-fourth General Assembly convened in 1931, it was asked to amend the former legislation by adding an "assistant inspector" to the division. This was done so that the department of health now has two inspectors who are devoting their full time to gathering evidence and prosecuting health charlatans, medical fakers, etc. No one special group of illegal practitioners is found to predominate either in number of investigations or classification of arrests. They are widely distributed among laymen, naturopaths, faith healers, dietitians, herb doctors, naprapaths, bone-setters, masseurs, drug vendors, religious healers, superfluous hair removers, gymnasts, weight reducers and increasers, turkish bath proprietors, Indian herb doctors, manufacturers and retailers of useless electrical devices without therapeutic value, inventors and peddlers of worthless diets, exercise and reducing systems, radio broadcasting charlatans, manufacturers of questionable medicines, worthless hair growers, and many others too numerous to mention. There is no worse menace to health than the fraudulent healer who has neither medical knowledge nor character as a basis for his work. At his best the quack or medical charlatan commits manslaughter, often with various refinements of torture, and such a person who takes a curable case and deludes the patient with visions of a cure until his case is hopeless is guilty of nothing less than murder. Nothing is more worthy of condemnation than the swindling of the sick. Yet this is being done regularly every day in the week by many self-styled doctors who are in search of easy money. These unscrupulous men know that many sick people are susceptible to cut rates and that others will try any remedy promising to restore their health, especially if their case has been given up by medical science. Laws which regulate the practice of the healing arts are designed primarily for the protection of the public, and not for physicians, as many of the quacks will tell you. Fundamentally, the cure for quackery is education. It has been said that the supply of electric belts and swamp root extracts will be fairly relative to the amount of ignorance in the community, and that it will shrink in proportion as people learn that the only refuge in illness is the reputable licensed practitioner. There is no doubt that as long as ignorance exists, quackery will thrive. The education of the public is perhaps our strongest weapon against the charlatan, though it is surprising to learn that supposedly intelligent people are sometimes deluded into believing that these fakers can help them. Countless ill-gotten fortunes have been built up in America during the last forty or fifty years by the vending of spurious drugs and health apparatus, and one can only guess at the number who might have been saved by skilled medical science, but who have gone to their graves because of their faith in some useless electrical device or flour and water pill. The people of this state must be made aware of the health laws and their beneficial purposes and effects. They must be informed of the dangers of treatment by unlicensed practitioners. The press should aid us in bringing to the attention of the public, the prosecution and conviction of offenders. They must be informed that every licensed practitioner must display his

Editor's Note—This material was taken from a radio address delivered from WOI at Ames, Iowa, September 2, 1932, by Herman B. Carlson, Inspector for the Division of Law Enforcement, State Department of Health.

license and registration card in his office in a conspicuous place. A law was enacted by the last legislature compelling every physician, osteopath and chiropractor to designate his profession on his sign outside his office and making it punishable as a misdemeanor if they failed to do so. One should look for these credentials when engaging the services of a doctor to make sure of patronizing the regular ethical practitioner.

IMMUNIZATION AGAINST DIPHTHERIA

Following a conference of experts in July of 1929, the Health Organization of the League of Nations has carried out a world-wide investigation into the problem of immunization of children against diphtheria. The Health Committee, basing their recommendations upon the voluminous statistics gathered in their research, recently adopted a series of fourteen resolutions. These resolutions contain, as it were, an epitome of our knowledge on the subject of immunization against diphtheria, and represent an international consensus of opinion. Although this may appear to be a somewhat bold statement, we consider that they constitute a doctrine, which in view of the qualifications of its authors may be regarded as established.

The following fourteen resolutions are cited as adopted by this Committee:

1. Immunization against diphtheria, when carried out under suitable conditions and with efficient prophylactics, effects a large reduction in the diphtheria mortality and morbidity rates among children thus treated. This is proved by studies carried out under strictly comparable conditions, such as those observed during the recent enquiries.

2. The reactions sometimes observed after the injection of diphtheria prophylactics give no cause for alarm and should not interfere with the campaign for the immunization of children, including tuberculous children, nor should they prevent the choice of the most active prophylactics.

3. The conclusion appears justified that, in spite of a few exceptional cases, the efficacy of immunization may be deduced from the change of the Schick reaction from positive to negative.

4. Taking as a basis the figures concerning the morbidity, the percentage of Schick reactions rendered negative after the injections of the immunizing agent, and a certain number of titrations of antitoxin in the blood of persons immunized, it may be concluded that formol toxoid (anatoxin) is the most efficient of those antigens which have been the subject of our comparative study—i. e., mixtures of toxin, anti-toxin and formol toxoid (anatoxin), and should be recommended for the present.

5. The clinical observations submitted to the Conference indicate that, so far as can be determined up to the present, the immunizing power of formol toxoid (anatoxin) in man appears to be in relation with the antigenic value of the prophylactic as measured by the flocculation method.

6. The method of administration recommended is by subcutaneous injection. When this is not possible, the prophylactic may be applied to the nasal mucous membrane. Our experience with the cutaneous method has not been favorable.

7. Immunization should be carried out by means of three injections. It is hoped that, in the future, the use of a more active prophylactic will make it possible to immunize with two or perhaps even one injection.

8. The intervals recommended between injections are three weeks between the first and second injections, and at least two weeks between the second and third.

9. It is unnecessary to carry out the Schick reaction before immunization. It is, however, desirable to use the Schick reaction before and after immunization in a certain proportion of subjects in order to determine the value of the method employed.

10. It is recommended that immunization against diphtheria should be carried out not later than during the pre-school period, after the end of the first year of life.

If the children have not been immunized during the pre-school period, they should be immunized, if possible, during the first year of school attendance.

11. Charitable organizations and administrations receiving children in homes (holiday camps, "preventoria,"* sanatoria, etc.) are advised to require, from both children and staff, a diphtheria immunization certificate on admission or a certificate attesting that the Schick reaction was negative.

12. Immunization is recommended for medical, nursing and domestic staffs in hospitals, homes, dispensaries, sanatoria, schools, etc.

13. Immunization is to be recommended even during epidemics in the cases of children who have been in contact with patients, as there is so far no evidence on record as to the existence of a negative phase.

14. In the opinion of the experts, diphtheria immunization should form the subject of active public education on the part of the health administrations of the different countries in order to bring home to everyone the advantages of this method of protection in safeguarding the public health.

* I. e., institutions for delicate children.

MEDICAL SERVICE FOR UNIVERSITY STUDENTS

Varied and many are the plans which have been devised for rendering a medical service to a sufficiently large number of persons to afford the group not only an adequate but an inexpensive medical service. It has been extremely difficult to compare the cost of the various systems, since the services rendered and the privileges offered differ widely.

The Committee on the Costs of Medical Care has attempted to approach this phase of medical practice by an organized survey of the medical services offered students in many state universities. In a recent report* they conclude that under an organized medical service young men and women, of the age and type of college students, can be provided with comprehensive medical care at a cost of $14.00 to $24.00 per capita annually. Their survey reviews a service rendered to 40,000 students in four educational institutions (Michigan, Minnesota, California, and Oregon State Agricultural College) where a comprehensive medical service is provided for students. At all four institutions the health services were found to be maintained through payment of student fees supplemented by subsidies from the institutions themselves. These subsidies ranged from almost nothing to almost one-half of the entire cost of assistance. At four state institutions, student fees practically covered all costs.

If we assume that the survey, which is reported, is applicable in part to all of the 569 chief colleges and universities of the United States, some 800,000 or about six-tenths of one per cent of the entire population of the country, would be eligible to this comprehensive medical care and health supervision at a very modest fee for at least nine or ten months of the year. If, as in the case of some educational institutions, faculty members and their families, or employees and their dependents (or both) were included, more than 300,000 additional individuals would thus be entitled to such care. Certainly such assistance would be acceptable to any large group of our population at a fee such as that indicated in this report.

Under the individualistic system, students could not obtain nearly so much nor so competent service even for a similar average expenditure, as they receive under the group plan. It is further safe to assume that if the student were required to select his private physician and pay for each visit or service rendered, he would not consult a physician nearly as frequently or freely, and often would obtain his medical advice from friends or the community drug store and the physician in private practice would in no sense benefit from his need of service.

But how would the physician fare under such a program? In private practice, a physician could not care for so large a clientele even under such favorable conditions as those existing under the group system, and even though the cost per patient were twice or three times that indicated, the income from such a practice would be inadequate. Without doubt, the system would lend itself to mismanagement, and in some instances, the service rendered would not be of the same high type which is obtainable from a physician in private practice.

There need be no greater inefficiency in such a medical department than in any other department of the teaching institution.

Due to the possibilities of administrative control, it appears that under this system the individual physician could not be so readily imposed upon as he is in private practice, since certain rules and regulations would be established governing the time of each individual physician for service outside established office hours.

It has been suggested that the medical practice of the future will differ materially from that of today, and it is only by keeping abreast of the various new benefits and experiments in medical practice that the medical profession will be in a position to adequately and tactfully control the channel into which medical practice may be directed.

* University Student Health Service by Don M. Griswold, M.D., and Hazel I. Spicer, published by the University of Chicago Press.

University Hospitals
MONTHLY CLINIC
Friday, March 17, 1933

10:00 to 11:00 A. M.
Medicine—Surgical Amphitheater

11:00 to 12:00 A. M.
Neurology—Surgical Amphitheater

12:10 P. M.
Luncheon—Doctors' Dining Room

1:00 to 2:00 P. M.
Genito-Urinary Surgery —Surgical Amphitheater

2:00 to 3:00 P. M.
Surgery—Surgical Amphitheater

SPEAKERS BUREAU ACTIVITIES

MEETING OF MERIT
February, 1933

The Cedar County Medical Society met on Friday, February 21, at Tipton. The following program was presented:

Prophylactic Obstetrics—Chas. S. Day, M.D., Cedar Rapids.

Premature Birth and Injuries to the New Born—M. J. Foster, M.D., Cedar Rapids.

The Speakers Bureau is pleased to award Cedar County the distinction of the "Meeting of Merit" for the month of February. It has been several years since this county has held any meetings of the society other than business meetings for the purpose of electing officers, etc. Small societies surrounded by large societies, as Cedar County is, often experience difficulty in keeping their own society active. An efficient and progressive state medical organization must be based on active county units. The Bureau therefore congratulates the Cedar County Medical Society and its secretary, Dr. E. J. Van Metre, upon this meeting and hopes that such programs will become a regular part of the Cedar County Medical Society activities.

POSTGRADUATE WORK

The Speakers Bureau has arranged three extension postgraduate courses to be held this spring in various sections of the state. The enthusiasm with which they are being supported indicates the continued popularity of this type of work among the members of the medical profession in Iowa.

The first course, sponsored by the Boone-Story Medical Societies, began on Thursday, March 2, and is on Neurology and Psychiatry. The lectures are held each Thursday evening at 7:30 at the College Hospital at Ames. The following lectures are scheduled:

March 2—Anatomy and Physiology of the Nervous System, Tom B. Throckmorton, M.D., Des Moines.

March 9—Neurologic Diagnosis, F. A. Ely, M.D., Des Moines.

March 16—Poliomyelitis—Epidemic Cerebrospinal Meningitis, P. C. Jeans, M.D., University of Iowa.

March 23—Syphilis of the Central Nervous System, C. E. Van Epps, M.D., University of Iowa.

March 30—Mental Hygiene, A. H. Woods, M.D., University of Iowa.

April 6—Tumors of the Central Nervous System, F. A. Ely, M.D., Des Moines.

April 13—Psychoneurosis, A. H. Woods, M.D., University of Iowa.

April 20—Border Line Cases, William Malamud, M.D., University of Iowa.

April 27—Insanity, R. A. Stewart, M.D., Independence.

May 4—The Sympathetic Nervous System, A. W. Adson, M.D., Mayo Clinic.

On Thursday, March 9, a course on Diseases of Metabolism and Endocrinology began at Mason City for the doctors in the second district. They, too, will meet every Thursday evening at 7:00 o'clock at the Hanford Hotel for a series of ten weeks. The outline for this course is given below:

March 9—Gonads—Male, J. C. Hill, M.D., Newton; Female, Joseph Brown, M.D., Des Moines.

March 16—Physiology of the Endocrines, A. J. Carlson, M.D., University of Chicago.

March 23—Obesity, Fred Smith, M.D., University of Iowa; Diabetes Mellitus, Russell M. Wilder, M.D., Mayo Clinic.

March 30—Physiology of the Liver, Frank C. Mann, M.D., Mayo Clinic; Surgical Management of Diseases of the Biliary Tract, H. L. Beye, M.D., University of Iowa.

April 6—Blood Diseases, C. W. Baldridge, M.D., University of Iowa; F. H. Lamb, M.D., Davenport.

April 13—Migraine and Dizziness, C. E. Van Epps, University of Iowa.

April 20—Arthritis, Martin I. Olsen, M.D., Des Moines.

April 27—Physiology and Diseases of the Thyroid, H. S. Plummer, M.D., Mayo Clinic; Surgical Management of the Thyroid, J. de J. Pemberton, M.D., Mayo Clinic.

May 4—Diseases of the Pituitary and the Parathyroid, J. D. Boyd, M.D., University of Iowa; Diseases of the Spleen, F. R. Peterson, M.D., University of Iowa.

May 18—Allergy, D. J. Glomset, M.D., Des Moines.

The third course is a course on the "Fundamentals in Medicine," to be given at Waterloo, beginning Friday, March 10, and continuing each Thursday at 5:30 for ten weeks. Over one hundred men from Black Hawk and surrounding counties have enrolled for this course.

March 10—Experimental Medicine in Its Relation to Clinical Medicine, Charles Mayo, M.D., Mayo Clinic, Rochester.

March 16—Allergy, H. L. Alexander, M.D., Washington University.

March 23—Cellular Immunity, Paul Cannon, M.D., University of Chicago.

March 30—Physiology of the Gastro-intestinal Tract, W. C. Alvarez, M.D., Mayo Clinic, Rochester.

April 6—Focal Infection, Henry Ulrich, M. D., Minneapolis.

April 13—Eye Grounds in Disease, Henry P. Wagener, M.D., Mayo Clinic.

April 20—Arthritis, M. J. Shapiro, M.D., University of Minnesota.

April 27—The Sympathetic Nervous System, A. W. Adson, M.D., Mayo Clinic.

May 4—The Newer Conception of Blood Dyscrasias, C. W. Baldridge, M.D., University of Iowa.

May 18—Chemiotherapy, Oscar H. Plant, M.D., University of Iowa.

Anyone located near the centers where these courses are being given can still enroll for the work. Write the Bureau for information.

THE OPEN FORUM

PIONEER MEDICAL FEES

It may interest you to know what fees we old-timers received. I located in Sioux City in 1887 later going to Alton for eighteen years, and here is a sample of what we received at that time. We were still suffering from the depression following the Civil War, which did not abate until 43 years after the close of the War. We received $1.00 for a city call, with nothing extra for night calls; office calls 50c; obstetrical cases, in town, $5.00 day or night and nothing extra for overtime; obstetrical cases in the country, a flat rate of $10.00 regardless of distance, time spent, or complications. I recall one instance when I started at nine in the evening and did not arrive at the patient's home until daylight the following day. This case was a face presentation, and I remained all day, all night and until noon of the next day, when a ten-pound baby was born. The patient was a primipara, 35 years of age and she had a very hard time. I collected $10.00 and was glad to get that. I am afraid that these times are on their way back again.

FERDINAND J. SMITH, M.D.,
Milford, Iowa.

RESOLUTIONS

Iowa State Medical Journal
Des Moines, Iowa
Dear Sirs:

The Muscatine County Medical Society held a business meeting at the Hotel Muscatine on the evening of February 16th after which a buffet lunch was served.

Among other business transacted was the following resolution:

Whereas the general tax burden has become so serious and all public officials, local, state, and national, must assume the responsibility of assisting in reducing the same, and

Whereas the use of salaried traveling representatives, office help, stationery, postal expense and follow up work for furthering the doctrine of prenatal care adds to the tax burden, and

Whereas the use of such representatives and letters may be better, we feel that the work is in most cases a duplication of our own where any heeding may be expected and a total loss where the individual doctor cannot make contact

Be it hereby resolved that the Muscatine County Medical Society go on record as opposed to the State Department of Health utilizing funds for this work until the financial budget of this country is more nearly balanced and the benefits of said work more fully proved.

Be it furthermore resolved that a copy of this resolution be spread on the records of this society and a copy be sent to the State Board of Health and to the Iowa State Medical Journal for publication.

C. P. PHILLIPS, M.D., Sec'y.
Muscatine County Medical Society.

RADIO PROGRAMS

Radio talks during the month of March, sponsored by the Speakers Bureau of the Iowa State Medical Society, will be given as follows:

WOI—Fridays, 4:00 p. m.
WSUI—Thursdays, 8:00 P. M.

March 10—Tonsils and Adenoids—Ben Budge, M.D.
March 17—Fatigue—L. F. Catterson, M.D.
March 24—Rickets—C. A. Waterbury, M.D.
March 31—Epilepsy—M. N. Voldeng, M.D.

KEEP THAT PROTECTION

During these days of financial stringency almost every man is curtailing expenditures wherever feasible. Good judgment and a knowledge of facts are essential in determining where and how monetary leaks are to be stopped. Often the long view will show the value of a service which at close hand may seem unnecessary. This is especially true of malpractice protection. In these times protection is of relatively greater importance because of the greater probability of malpractice suits being fabricated by disgruntled and unscrupulous patients.

Reports from insurance companies show an increase of malpractice suits in Iowa during the last three years of almost 100 per cent. One never knows when he will be called upon to defend himself against such charges. The premium paid for adequate protection is not only a great saving in money in the event of a suit but is a remedy for worry about such chances. Your membership in the State Medical Society makes you eligible for protection. Malpractice insurance should be the last expense item curtailed.

PRIZE OFFERED FOR GOITER ESSAY

The American Association for the Study of Goiter, for the fourth time, offers three hundred dollars as a first award, and two honorable mentions for the best three essays based upon original research work on any phase of goiter presented at their annual meeting in Memphis, Tennessee, May 15, 16 and 17, 1933. It is hoped this will stimulate valuable research work, especially in regard to the basic cause of goiter.

Competing manuscripts must be in English and submitted to the corresponding secretary, J. R. Yung, M.D., 670 Cherry street, Terre Haute, Indiana, not later than April 1, 1933. Manuscripts arriving after this date will be held for the next year or returned at the author's request.

SOCIETY PROCEEDINGS

Cedar County

Tuesday, February 21, members of the Cedar County Medical Society met in Tipton. Cedar Rapids physicians furnished the following program, after the six-thirty dinner: Prophylactic Obstetrics, Charles S. Day, M.D.; Diseases of the New Born, Morgan J. Foster, M.D., and Social and Medical Problems, Arthur W. Erskine, M.D.

Crawford County

Physicians and their wives were guests of the Crawford County Medical Society at a meeting held in Denison, Tuesday, February 14. A scientific program was presented following the seven o'clock dinner, and consisted of a symposium on Biliary Tract Disease. George M. Higgins, Ph.D., of the Mayo Foundation at Rochester, spoke on A Physiologic Consideration of the Biliary Tract; W. D. Runyon, M.D., of Sioux City, discussed Diagnosis and Medical Treatment of Biliary Tract Disease; and Herbert H. Davis, M.D., of the surgical department of the University of Nebraska School of Medicine, presented an address on the Surgical Treatment of Biliary Tract Disease. All papers were illustrated with lantern slides.

Dubuque County

The regular monthly meeting of the Dubuque County Medical Society was held Tuesday, February 14, in the Finley Hospital at Dubuque. The evening was devoted to a discussion of the Final Report of the Committee on the Costs of Medical Care, with Gordon F. Harkness, M.D., of Davenport, leading the discussion.

Roy I. Theisen, M.D., Secretary.

Hamilton County Annual Meeting

Guy B. Anderson, M.D., of Ackley, was guest speaker for the Hamilton County Medical Society, when that group met Tuesday, February 14, in Webster City. Dr. Anderson read a paper on Office Treatment of Rectal Fissure. Officers elected for 1933 are: Dr. W. B. Lewis of Webster City, president; Dr. E. W. Slater of Jewell, vice president; Dr. M. B. Galloway of Webster City, secretary and treasurer; Dr. F. F. Hall of Webster City, delegate; and Dr. George A. Paschal of Stratford, alternate delegate.

M. B. Galloway, M.D., Secretary.

Linn County

A complimentary dinner was served to members of the Linn County Medical Society at their regular meeting held Thursday, February 9, Hotel Montrose, Cedar Rapids. Papers were presented as follows: Muscle Contractures, Arthur Steindler, M.D., University of Iowa, discussion by Drs. William R. Cubbins, Chicago; Jacob Kulowski, Iowa City; Donald Conzett, Dubuque; and R. C. Alt, Cedar Rapids; Fracture of Condyles of Femur and Tuberosities of Tibia, dealing with Morbid Anatomy and Indications for Treatment, William R. Cubbins, M.D., Northwestern University, Chicago, discussion by Drs. Steindler, Verl A. Ruth, Des Moines, and Peter A. Bendixen, Davenport. A ten-minute paper was read by Charles S. Day, M.D., of Cedar Rapids, on Prophylactic Obstetrics.

The next program of the Linn County Medical Society will be held March 9, with Dr. Harold Hays of New York City, speaking on The Preventive and Alleviating Methods in the Treatment of Deafness.

T. F. Hersch, M.D., Secretary.

Madison County

The members of the Madison County Medical Society were guests in the home of Dr. and Mrs. I. K. Sayre of St. Charles, for a six-thirty dinner, Monday, February 13. Other guests were Drs. John H. Peck and Frank A. Ely, both of Des Moines, who furnished the evening program. Dr. Ely showed pictures of Yellowstone National Park, accompanying his slides with a descriptive talk on the Park and surrounding country; and Dr. Peck spoke on interesting places he had visited during his recent European trip, also showing motion pictures.

C. B. Hickenlooper, M.D., Secretary.

Mahaska County Annual Meeting

Officers elected recently to serve the Mahaska County Medical Society for 1933 are: Dr. E. Marsh Williams, president; Dr. E. B. Wilcox, vice president; Dr. L. F. Catterson, secretary; Dr. L. A. Rodgers, treasurer; Dr. B. G. Williams, delegate and Dr. G. H. Clark, alternate delegate. All officers are of Oskaloosa.

Polk County

The regular monthly meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held in the Fort Des Moines Hotel, Des Moines, Tuesday, February 28, with approximately one hundred and fifty members and guests in attendance. Joseph Brown, M.D., presented the third of a series of lectures on aspects of menstruation, this one entitled, Menstrual Disorders. It was evident that his illustrated lecture was the result of a vast amount of reading, study and experimental research. The subject was discussed by Walter D. Abbott, M.D., from the angle of the nervous system; by Thomas A. Burcham, M.D., from a radiologic viewpoint; and by Floyd W. Rice, M.D. Motion pictures of the bone structure of the foot and methods of fitting were

shown through the courtesy of the White Shoe Company and the Field Shoe Company. Following the scientific session, a social hour was enjoyed by many of the members present.

L. K. Meredith, M.D., Secretary.

Story County Annual Meeting

Dr. W. B. Armstrong of Ames was named president of the Story County Medical Society, at the annual election held Thursday, February 23. Other officers are: Dr. H. W. Bowers of Nevada, vice president; Dr. W. B. Sperow of Nevada, secretary and treasurer; Dr. Earl B. Bush of Ames, delegate, and Dr. B. G. Dyer of Ames, alternate delegate.

Taylor County Annual Meeting

Tuesday, January 31, members of the Taylor County Medical Society met in Bedford to elect officers for 1933. The results are as follows: Dr. L. T. Reed of Gravity, president; Dr. J. T. Maloy of Bedford, vice president; Dr. G. W. Rimel of Bedford, secretary and treasurer; Dr. L. T. Reed, delegate.

Wapello County

The Wapello County Medical Society met in regular session on Tuesday, February 21. C. G. Bishop, M.D., gave a very interesting paper on Endocrine Disturbances Caused by Pathologic Conditions of the Body. Following this paper R. O. Hughes, M.D., held a Pediatric Clinic, presenting and discussing two very interesting and rather infrequent cases; one of hemolytic jaundice and another of erythema multiforme.

Evon Walker, M.D., Secretary.

Woodbury County

Nearly two hundred visiting physicians, dentists, pharmacists and veterinarians from northwestern Iowa, northeastern Nebraska and southeastern South Dakota, heard Oliver J. Fay, M.D., of Des Moines, discuss the Final Report of the Committee on the Costs of Medical Care, at the February meeting of the Woodbury County Medical Society, in the Main Ballroom of the Martin Hotel, in Sioux City, Thursday, February 23. The subject was further discussed by Drs. William Jepson of Sioux City, W. S. Petty of Sioux City, Robert L. Parker of Des Moines, James E. Reeder of Sioux City, Joseph Brown of Des Moines, and Thomas A. Burcham of Des Moines. The following resolution, proposed by Dr. William Jepson, was unanimously adopted: "While we of the medical profession recognize that it, in common with all professions, will undergo a continuous evolution to meet the demands of a constantly changing social structure, we however, do not feel that this can be along the lines advocated by the majority report of the Committee on the Costs of Medical Care, but will be along channels such as shall from time to time be revealed to us acting in the best interests of the people we serve and the profession we represent."

Lawrence E. Pierson, M.D., Secretary.

Fort Madison Medical Society

Dr. Harold Noble was elected president of the Fort Madison Medical Society at a meeting held in Fort Madison, Friday, February 10. Dr. Frank Richmond was named vice president, and Dr. H. G. Cleary, secretary and treasurer.

Sioux Valley Medical Association

The Thirty-eighth Annual Session of the Sioux Valley Medical Association was held January 24 and 25, at Sioux City, with the following program:

Tuesday, January 24

8:30 Sound Motion Pictures.
Courtesy of Petrolagar.

10:00 Pediatric Clinic.
F. W. Schultz, M.D., Head of the Department of Pediatrics, University of Chicago.

11:00 Medical Clinic.
Fred Smith, M.D., Head of the Department or Internal Medicine, University of Iowa.

1:30 "The Significance of the Vitamins in Child Nutrition."
F. W. Schlutz, M.D.

2:00 "A Discussion of Epigastric Pain."
Fred Smith, M.D.

3:00 "Modern Views of the Etiology and Treatment of Abortion."
"Handling of the Delivery of the Occiput Posterior Position."
J. C. Litzenberg, M.D., Head of the Department of Obstetrics and Gynecology, University of Minnesota.

4:30 Business Session.
Report of Committees and Annual Election of Officers.

6:30 Dinner.
Vocal Selections.
Mrs. Frederick Roost, Sioux City.
"Brains Versus Brawn."
A. G. Pohlman, M.D., Dean of the School of Medicine, University of South Dakota.

Wednesday, January 25

8:30 Sound Motion Pictures.
Courtesy of Mayo Clinic.

10:00 Pathological Clinic.
Carl Russum, M.D., Head of the Pathological Department, Creighton University School of Medicine.

11:00 Surgical Clinic.
Waltman Walters, M.D., Chief of Surgical Section, Mayo Clinic.

1:30 "Recent Developments in Our Knowledge of Heart Disease."
Carl Russum, M.D.

2:00 "Surgical Lesions of the Stomach and Duodenum, and their Treatment."
Waltman Walters, M.D.

3:00 "Prostatectomy and Transurethral Prostatic Resection Compared."
Edward Davis, M.D., Professor of Urology, University of Nebraska.

3:30 "A General Discussion of Syphilis from the Practitioner's Standpoint."
Paul O'Leary, M.D., Chief of Dermatological Section, Mayo Clinic.

4:00 "A New Method of Fixation for the Fragments in Compound Fractures."
H. Winnett Orr, M.D., Head of the Department of Orthopedic Surgery, University of Nebraska.

Officers elected for 1933 are: Dr. S. L. Slater of Worthington, Minnesota, president; Dr. E. L. Perkins of Sioux Falls, South Dakota, first vice president; Dr. C. C. Tellisen of Wynot, Nebraska, second vice president; Dr. Roscoe Jepson of Sioux City, Iowa, secretary; and Dr. W. R. Brock of Sheldon, treasurer.

Roscoe Jepson, M.D., Secretary.

Waterloo Medical Society

William T. Harsha, M.D., chief surgeon of the Illinois Central Hospital, Chicago, addressed members of the Waterloo Medical Society at the regular meeting of that organization held Tuesday, February 21. His subject was Causes and Prevention of Mortality in Appendicitis.

AUXILIARY NEWS

Appanoose County

Thursday, February 16, the members of the Woman's Auxiliary to the Appanoose County Medical Society met at the home of Mrs. F. B. Leffert in Centerville, where the afternoon was spent making blankets for the nursery at the St. Joseph's Mercy Hospital.

Program of Medical Women's National Association

Hotel Astor—Headquarters

All meetings held at Hotel Astor unless otherwise specified.

Sunday, June 11

10:00 A. M. Board of Directors meeting. Breakfast.
2:00 P. M. Tour of city, followed by a tea in honor of Dr. Esther Lovejoy, New York City.
8:00 P. M. Informal reception for visiting women physicians by officers of Branch No. X, Medical Women's National Association.

Monday, June 12

8:00 A. M. Breakfast. "History of Medical Women," Kate Mead, M.D., Haddam, Connecticut.
9:00 A. M. Registration.
10:00 A. M. Annual Meeting of Medical Women's National Association. Reports of officers and committees. Election of officers.
12:00 Noon Luncheon in honor of Past Presidents.
2:30 P. M. Annual meeting continued. Reports of Committee on Medical Care and other plans. Presentation of foreign guests. Introduction of new officers.
7:00 P. M. Banquet, Roof Garden, in honor of Dr. Mary O'Malley, Washington, D. C.

Tuesday, June 13

8:00 A. M. Breakfast. Board of Directors Meeting.
8:00 A. M. Breakfast, members and visiting women physicians. "Women Physicians of Wisconsin," Ida Shell, M.D., "The Women's Evening Clinic of Milwaukee," Eleanore Cushing, M.D.
10:00 A. M. Drive to Oconomowoc, tour of Carnation Milk Plant.
12:00 Noon Luncheon, Draper Hall.
4:00 P. M. Tea in honor of Life Members of the Medical Women's National Association, courtesy of Dr. Bertha Kaessler, Fox Point.
6:30 P. M. Informal dinner for all women physicians.
8:00 P. M. General meeting, American Medical Association.

Wednesday, June 14

8:00 A. M. Breakfast. "The American Women's Hospitals," Esther Lovejoy, M.D., New York City; L. Rosa Gautt, M.D., South Carolina; Hilda Sheriff, M.D., North Carolina, and Lillian Smith, M.D., Kentucky.
9:00 A. M. to 5:00 P. M. General meetings, American Medical Association.
6:30 P. M. Dinner. "Scholarships," Martha Tracy, M.D., Philadelphia.

Thursday, June 15

8:00 A. M. Breakfast. "Opportunities for Women," Bertha Van Hoesen, M.D., Chicago.
9:00 A. M. to 5:00 P. M. General meetings, American Medical Association.
6:30 P. M. Dinner. "The Woman Physician and Legislation," Louise Taylor Jones, M.D., Washington, D.C.
9:00 P. M. Meeting, American Medical Association.

Friday, June 16

8:00 A. M. Breakfast. "The Century of Progress Exposition," Lena K. Sadler, M.D., Chicago.
9:00 A. M. American Medical Association.
12:30 P. M. Luncheon in honor of foreign women physicians.
2:00 P. M. American Medical Association.

INTERESTING NEWS

In Brief

A recent experiment conducted at the Baker Memorial Pavilion of the Massachusetts General Hospital in Boston, whereby patients whose incomes range from less than $1,000 to around $5,000 are eligible for hospital care at very moderate sums, has just closed its second year of operation with 81 per cent of its operating cost, including depreciation, paid for on these middle-rate fees.

In a report made before the National Academy of Scientists at its Ann Arbor meeting, Dr. G. A. Parker, Director of the Zoological Laboratory of Harvard University, discussed neurohumor, a secretion, which passing from cell to cell, relays nerve impulses from nerve centers to peripheral regions.

Tests on the effect of smoking made at the University of Michigan Hospital indicate that the peripheral temperatures of fingers and toes are cooled during the use of tobacco from one to nine degrees, but at the same time blood pressure and pulse rate increase.

Lester J. Tilton and Harry De Joannis, who operated a cancer clinic in Clinton, Iowa, and who fled to Chicago when threatened with indictment here, have just been sentenced to prison terms of one to five years and fined $2,000 each in the Chicago Criminal Court.

A recent investigation indicates that there are three times as many cases of tuberculosis among the negroes as among the whites, and strangely, that the northern negroes, who are less poor than the southern negroes, suffer the higher mortality from this disease.

The January issue of Annals of Internal Medicine contains an article on the life and history of Dr. William Savage Pitts, writer of the well-known hymn, "Church in the Wildwood," who practiced medicine in Bremer and Chickasaw counties from 1857 to 1916.

Searching for a satisfactory treatment in undulant fever, investigators at the University of Rochester School of Medicine and Dentistry have observed improvement in experimentally infected animals through the use of immune serum, artifically induced fever and orally administered vaccine.

A preliminary study of the comparative concentration or potency of the anti-anemic principle present in liver suggests that the concentration may be greater in the liver of the horse than in the liver of cattle as now employed.

The Cameron prize given annually by the University of Edinburgh, Scotland, has been awarded for 1933 to Drs. George F. and Gladys H. Dick of Chicago, for their distinguished work in the therapy of scarlet fever.

Workers in the Western Pennsylvania Hospital Institute of Pathology describe seven stages in the life of the bacillus of tuberculosis, indicating that three may be reproductive stages and four stabilized stages which are vegetative.

A new series of radio talks sponsored by the Iowa Tuberculosis Association began the second week of February over station WSUI at Iowa City. The broadcast is given semi-monthly on the second and fourth Tuesdays from 8:40 to 9:00 P.M.

According to a recent report made before the American College of Physicians, relief from the severe agony of angina pectoris has been accomplished by section or injection of the sensory nerves of the heart.

Dr. Oluf Thomsen, director of the Copenhagen Universitiés Pathological Institute using methods of great refinement has recently reported two new blood groups, making a total of six types instead of four as considered heretofore.

It is reported that a group of three hundred Chicago doctors are attempting a plan of group practice with group payment as advocated in the Final Report of the Committee on The Costs of Medical Care.

The anti-neuritic vitamin B has been produced synthetically by the action of ultra-violet rays on adenine sulphate by research workers in the Bengal chemical and pharmaceutical work in Calcutta.

Conclusions drawn by a Buenos Aires investigator indicate that cholesterol, long studied in its relationship to cancer, is important in that it "prepares the soil" for the growth of cancer cells.

Corporate practice of medicine in Illinois was held illegal recently by a judge of the Superior Court, an action which parallels a similar decision by the Supreme Court of Iowa.

According to a recent census the number of persons (and their dependents) in Germany entitled to social aid on a basis of war injury is stated at 820,000.

Judgment by default was given St. Luke's Hospital in Cedar Rapids in a recent suit to break a will by which the hospital was awarded $30,000.

It is estimated that dentists in this country treat 24 million patients a year, the average bill for the year being eighteen dollars.

PERSONAL MENTION

Dr. D. E. Graham of Ottumwa, who has been seriously ill at his home, is now out of danger and is progressing nicely on his road back to health.

Dr. T. U. McManus of Waterloo, addressed the Fifty-fourth Annual Session of the Iowa Pharmaceutical Association, in Des Moines, Tuesday, February 14, on "Progressive Medicine and Allied Sciences."

Dr. William B. Chase, Jr., of Des Moines, was named deputy coroner to aid Dr. William Carpenter, county coroner. Dr. Chase was selected to fill the vacancy created by the absence of Dr. W. E. Sanders, who is now in California.

Dean Henry S. Houghton of the University of Iowa, spoke before the Cedar Rapids Ministerial Association, Monday, February 27, on "Re-thinking Foreign Missions."

Dr. E. B. Howell of Ottumwa, who is a surgical patient at the Presbyterian Hospital in Chicago, is reported as "doing well."

Dr. T. E. Davidson of Mason City, talked to the Hi-Y Club Wednesday, February 1, on "Prohibition: Alcohol and Its Effect Upon the Human Body."

Dr. E. J. Johnson, who has been practicing a little over a year in Milford, is leaving that city to enter the government service at the Fort Peck Hospital, Poplar, Montana.

Dr. R. C. Danley of Hamburg, is in a Florida hospital where he has been ill with influenza, and has undergone also a mastoid operation. He has been reported as doing nicely, but it will be some time before he will be able to resume his practice in Hamburg.

Dr. Roscoe P. Carney of Davenport, spoke before the Catholic Women's League, Wednesday, February 8. His subject was "Symptoms of Tuberculosis in Children."

Dr. A. H. McCreight of Fort Dodge, addressed members of the W. C. T. U. on "The Lures of Patent Medicines," Thursday, February 16.

Dr. Clyde R. Bradford, colored, has just arrived in Des Moines to enter into the practice of medicine, with offices located at East Fifth and Locust Streets. Dr. Bradford was graduated from Meharry Medical College of Nashville, Tennessee, in 1928 and served his interneship at the General Hospital, No. 2, Kansas City, Missouri. He comes to Des Moines directly from Kansas City, where he has served the hospital as its resident physician and surgeon for the past three years.

Dr. and Mrs. J. J. Potter have recently returned to Iowa City from a six month's European trip, during which time Dr. Potter attended clinics at Vienna, on eye, ear, nose and throat surgery. Dr. Potter will resume his work at the State University of Iowa College of Medicine, where he is an assistant surgeon.

Dr. Raymond Rice, city health officer of Council Bluffs, spoke on "Contagious Diseases Relative to Public Health," at the regular weekly luncheon of the Rotary Club, Friday, February 3.

Dr. W. W. Beam of Rolfe, was taken to a Webster City hospital recently for rest and treatment. Dr. Beam, who is seventy-four years of age had been confined to his home for several days with gall bladder trouble.

Three Council Bluffs physicians furnished the scientific program for the Omaha-Douglas County Medical Association, Tuesday, February 14. The speakers and their subjects were: Dr. S. D. Maiden, "Bronchoscopy and Esophagoscopy from the Standpoint of General Medicine," Dr. Gerald V. Caughlan, "Management of Prostatic Obstruction," and Dr. Aldis A. Johnson, "Pericarditis."

DEATH NOTICES

Herrick, John Francis, of Ottumwa, aged sixty-nine, died February 23, following a long illness. He was graduated in 1891 from the Keokuk Medical College and at the time of his death was a member of the Wapello County Medical Society. (A more complete obituary will be found in the History of Medicine Section of this issue.)

Keppler, Fred Albert, of Dubuque, aged thirty-one, died February 2, after an operation. He was graduated in 1929 from Marquette University College of Medicine, Milwaukee, and at the time of his death was a member of the Dubuque County Medical Society.

Lass, Daniel George, of Ocheyedan, aged seventy-five, died February 4, after a long illness following a stroke of apoplexy. He was graduated in 1886 from Vanderbilt University School of Medicine, Nashville, and had long been a member of the Osceola County Medical Society.

Witte, Max Ernest, of Clarinda, aged seventy-four, died January 29, after having been ill with influenza for several days. Death was the immediate result of a cerebral hemorrhage. He was graduated in 1881 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Page County Medical Society. (A more complete obituary will be found in the History of Medicine Section of this issue.)

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City
DR. ARTHUR D. WOODS, State Center
DR. FRANK M. FULLER, Keokuk
DR. WALTER L. BIERRING, Des Moines
DR. JOHN T. MCCLINTOCK, Iowa City

Historical Statistics Regarding the College of Medicine, State University of Iowa at Iowa City

JOHN T. MCCLINTOCK, M.D.*

(Continued from last month)

Dr. William S. Robertson, who was chosen for the chair of Medicine, was the son of an Iowa pioneer physician. He was educated in the public schools of Burlington and at Knox College, in Galesburg, Illinois. His professional learning was obtained largely from study in his father's office and at Jefferson Medical College where he was graduated in March, 1856. He practiced medicine with his father, who had now located in Columbus City (Junction) and finally in 1869 he moved to Muscatine.

Dr. Robertson was a classical scholar, reading Greek as fluently as he did English. He took an active part in civil affairs. In his earlier years he organized and took part with the vigilantes in hunting outlaws and bringing them to legal justice. He served as state senator and was responsible for the legislative action establishing the School for Feebleminded Children at Glenwood. To him more than any other is due the credit for legislation establishing the Iowa State Board of Health, which he served as its first president.

Dr. Robinson carefully prepared all his lectures in complete manuscript. They were classical in their wording and construction but as he read them to the class they lacked the force of a free speaker. When occasionally he put aside his paper to relate some incident in his practice the class greeted him with a round of applause, for he was a very interesting talker. Of his medical ability one of his associates wrote, "He had a remarkable ability as a diagnostician. He quickly picked out the essential points in the history and physical examination. In a direct and forcible manner he came to a conclusion so rapidly that it seemed like an intuition." He was a great believer in the efficacy of drugs, and was not content to "manage" the case or to wait for "nature to heal" but put his confidence in the medication.

In 1887, while lecturing to his class, he suddenly recognized the symptoms of brain tumor in himself. He announced that the lecture just given would complete his course and a few weeks later his life's work ended.

The only member of the first medical faculty with any extensive teaching experience was Gustavus Hinrichs. Born and educated in Germany, with a master's degree from Copenhagen, he immigrated to America in 1860. While waiting for a satisfactory opportunity to teach the Physical Sciences, in which he had specialized, he accepted a position to teach German, first in the Davenport High School, then at the University. After several years of waiting, he was rewarded by being made Professor and Head of the Department of Physical Sciences in the University and so when the medical school was organized he naturally became professor of Chemistry, and continued as such for almost seventeen years.

Dr. Hinrichs held strongly to the idea of the superiority of the physical sciences over all other fields of knowledge. He had no regard for the natural sciences or speculation of any kind and these he held up to ridicule on every occasion. "The laboratory," he said, "should be the temple of science." He reorganized the teaching of the Physical Sciences so as to have grade courses, the beginning ones being general in character and obligatory on all first and second year academic students; the special courses were elective. These

*Junior Dean and Professor of Physiology, College of Medicine, State University of Iowa.

reforms in the teaching of science were commented upon in the magazine *"Nature,"* published in London, as follows: "We trust that these important reforms in science teaching will prove contagious, and spread rapidly from the plateau of Iowa City to a region of even greater extent than the American continent."

For many years Dr. Hinrichs, because of the size of his department, had control of the educational policies of the academic department. However, in the early eighties with the growing importance of Natural Philosophy the followers of Dr. Hinrichs lost their voting majority. Open hostilities developed. Dr. Hinrichs appealed to the Board of Regents and to the people of the state through the public press. Much acrimonious material was published, which resulted in a series of investigations, first by the Regents, then by a special committee of the General Assembly. Much of the investigation was centered about the medical department and particularly its Dean, Dr. Peck. Several thousand pages of testimony tell the story of those troublesome days; but in the final chapters we find Dr. Hinrichs going to join the faculty of St. Louis University, and Dr. Peck and the medical department starting on a new era with a recently completed medical building.

To the chair of Physiology and Microscopic Anatomy, in those days considered the least desirable position on the faculty, there was appointed a young man who had only a year before obtained his medical degree from Bellevue Hospital. With his parents, William D. Middleton, at the age of twelve years, came to Davenport from Scotland, having already received a medal for high scholarship in Latin and Greek from the Scottish schools. He spent the rest of his life as a resident of Davenport. His kindly, genial manner, his ready wit and keen sense of humor, his readiness to give help whenever help was needed, his honesty and rigid adherence to what he believed was right, endeared him to all. His friends were many, his enemies unknown. When finally he was stricken with a fatal infection, accidentally acquired in his attempt to relieve a suffering patient, business in his home city practically stopped in order that the citizens could secure the last word from the bedside of their stricken friend.

Dr. Middleton's medical career started as a student in Dr. Peck's office, after which he attended a course of lectures at Bellevue Hospital, New York. He then went back to Davenport to start a general practice. In 1870 he began his course of lectures in Physiology and Microscopic Anatomy. He was an interesting lecturer and although there was nothing like a modern physiologic laboratory, he carried out a goodly number of vivisection experiments, which added much to the popularity of his course.

After the death of Dr. Robertson in 1887, Dr. Middleton was advanced to the chair of Theory and Practice. This position he held until the death of his friend Peck, when he became Professor of Surgery, in which position he continued until his death in 1902. In 1896 he was chosen dean of the faculty and under his leadership there began the growth and expansion of the medical school to its present form.

Under Dr. Middleton the first unit of a university hospital was built; after the fire which destroyed the medical building in the spring of 1901 he initiated the necessary steps for the erection of a new group of buildings which when completed served the college for a period of about twenty-five years. His last official act, completed while he was fighting his fatal infection, was to sign the diplomas of the class graduating in the spring of 1902. It has been said that Dr. Middleton never allowed his personal or private interests to interfere with his obligations to the medical school and thus with this last act it can be truthfully said "his work was ended."

Dr. John C. Shrader was a native of Ohio and obtained his general education at Marietta Academy in Ohio while his medical studies were pursued at the College of Physicians and Surgeons in Keokuk, from which he was graduated in 1865, and at the Long Island Hospital in New York, from which he received a degree in 1870. Before the war he had commenced the practice of medicine at Western, Linn County. At the outbreak of the Civil War he was commissioned captain of Company H, Twenty-Second Iowa Volunteers but was soon made surgeon of the same command. He served in many of the important campaigns and at the close of the war was discharged with high honors.

He at once settled in Iowa City and again took up the general practice of medicine and surgery. Upon the organization of the medical department, Dr. Shrader accepted the chair of Diseases of Women and Children and continued in active instruction until 1898 when he resigned and was honored with the appointment of Emeritus Professor.

In the spring of 1873, Dr. Shrader and Dr. Clapp were appointed a faculty committee to solicit funds and to supervise the remodeling of an old building known as "Mechanic's Academy" into a hospital. The building was owned by the

University and the Board of Regents had granted the faculty the use of the building but it was to be rebuilt without expense to the University. In the fall of that same year the committee had in



Mechanic's Academy as Rebuilt for Hospital
1873

readiness for the use of the medical faculty, a hospital with a capacity of twenty beds, fully equipped and under the management of the Sisters of Mercy. The funds had been obtained by contributions from the citizens of Iowa City and a grant from the City Council. A deficit of about $2,000, however, had to be assumed by the Board of Regents.

While a member of the Iowa Senate, in which capacity he served two terms, Dr. Shrader secured a legislative grant of $50,000 for the construction of a new medical building. This structure served the medical school from 1882 until destroyed by fire in 1901. In recognition of Dr. Shrader's services in the professional and material welfare of the school he was appointed Dean upon the death of Dr. Peck. In this position he served for a period of five years.

No member of this first faculty was more active in public affairs than Dr. Shrader. In addition to the activities already mentioned, which he successfully performed while conducting a very extensive private practice, he also served as city health officer, as president of the Iowa State Board of Health and Medical Examiners, and as a most active member in several lodges and in local and national medical societies. His death occurred on October 30, 1906.

It was to Dr. P. J. Farnsworth, the first professor of Materia Medica and Therapeutics, that the students went when in trouble. When discouraged and in need of help of any kind "his boys" always found a cheery face, helpful aid and fatherly advice. He soon became "Pappy" Farnsworth to the students and the title clung to him through the thirty odd years of his connection with the institution.

Dr. Farnsworth was born at Westford, Vermont in 1830. He was graduated in 1854 from the academic department and four years later from the medical department of the State University of Vermont. He continued his medical studies at the College of Physicians and Surgeons in New York and after graduating from there he came west to Iowa. He first located at Lyons but after a few years he moved to Clinton and was active in practice of his profession and in the public affairs of his city until his death on February 14, 1909.

Among his associates upon the first faculty Dr. Farnsworth was the outstanding classical scholar. His lectures lacked interest and force but his personality made him, among the students, one of the most influential members of the faculty. In 1892, after twenty-two years of service which involved the trying trip from Clinton to Iowa City and back, he gave up active teaching but continued his interests and contact with the school under the title of Emeritus Professor. Dr. Farnsworth's death removed to the beyond the last member of the original faculty.*



First Medical Class. 1870-71

On the morning of September 20, 1870, the faculty headed by President Black of the University, marched into the pit of the medical amphitheatre in Old South Hall, to formally open the introductory course in a new department of medicine. One can easily imagine the feeling of interest, excitement and speculation of these men as they started on this new venture. On the seats before them was a group of thirty-seven enrolled

* For an account of Dr. John T. Dillon, Professor of Medical Jurisprudence, see page 608, Iowa State Medical Journal, issue of December, 1932.

students, with many friends of the faculty and school. President Black spoke on the establishment and organization of the department; the difficulties and obstacles which had to be overcome and the pleasure with which they now welcomed a much larger attendance than had been expected and "invoked divine favor in behalf of its success and usefulness". Dean Peck then addressed the students and on the following day Professor Hinrichs gave the first lecture in the course on the subject of Chemistry.

The members of the first class had been enrolled without any regard to preliminary education, which was the common policy among the schools of that day. There was, however, some discussion at that time regarding the establishment of higher standards for admission and so in the school's catalogue of 1870-71 the statement "Should the Association of Colleges require ..... a more thorough preliminary education before admission, the faculty of this Department will most cheerfully aid in executing all such plans". It was not until thirteen years later that graduation from a high school or its equivalent became effective as a requirement for admission.

The tuition paid by the members of the first class was as follows:

Lecture fees for the entire course	$20.00
Matriculation ticket	5.00
Anatomical ticket	5.00
Graduation fee	25.00
Hospital ticket	Gratuitous

Tickets were required for admission to the professor's lectures and these could not be obtained before the matriculation fee was paid. Two weeks was allowed the students in which to secure their necessary tickets.

The size of the first enrollment was a surprise, but the fact that ten of the students were women was quite disconcerting to the faculty. The original plan had been to limit, as did other medical schools, the attendance to men. Legislative acts governing the University were enacted following the establishment of the University at Iowa City as provided in the revised constitution of 1857, and declared "that the object of the state university shall be to provide the best and most efficient means of imparting to the youth of the state, of both sexes, upon equal terms, a thorough education." There was no alternative and so, according to Dr. Farnsworth, the following was adopted by the faculty: "there was to be but one medical education, and all should share alike, good language should be used and respectful conduct observed." Dr. Middleton, writing about the school a few years after its organization, stated that the admission of women was a most unusual and startling policy for a medical school and as a result it gave the school nation-wide publicity, "both favorable and unfavorable". In an effort to mollify the adverse reaction of the public to the impropriety of having both sexes in the medical course, the faculty provided a separate dissecting room for the women. The ladies resented the discrimination and upon their insistence even this barrier to their equal rights was removed.

The anatomic difficulty already referred to which resulted in the resignation of the professor of anatomy, was the next event to bring the school to the attention of the public. Premature resurrections were common occurrences in the early history of nearly all medical schools, but it was exciting news in the quiet university city. The bitter attacks of the aroused public would undoubtedly have been fatal to the young school had it not been for the assistance of a few influential citizens who were able to effect a settlement of the difficulty

PROGRAMME OF LECTURES

IN THE MEDICAL DEPARTMENT,

IOWA STATE UNIVERSITY—SESSION 1870-71.

Time.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9 A. M.,	Boucher.	Boucher.	Shrader.	Boucher.	Boucher.	
10 A. M.,	Farnsworth.	Farnsworth.	Farnsworth.	Farnsworth.	Farnsworth.	Farnsworth.
11 A. M.,	Robertson.	Peck.	Middleton.	Robertson.	Peck.	Smith.
1 P. M.,	Medical Clinic.	Hinrichs.	Eye and Ear Clinic.	Hinrichs.	Surgical Clinic.	
2 P. M.,	Shrader.	Shrader.	Hazen.	Shrader.	Hinrichs.	
3 P. M.,	Middleton.	Peck.	Middleton.	Robertson.	Hinrichs.	

Prof. Dillon will lecture immediately after January 1st, 1871.

Program of Lectures 1870-71

which was satisfactory to most of the interested and aggrieved parties.

The vivisection experiments of the professor of physiology lead to another unhappy and troublesome period. It seems that a dog in which the professor had made a gastric fistula escaped. How the dog got out of his pen in the medical building or what became of him after he had gained his liberty, no one knew. Nevertheless the newspaper reporters heard of the loss and published a vivid and appealing story about the starving, fistulous, homeless beast and again the university medical department was the center of much undesired publicity.

The outstanding feature of the medical curriculum of sixty years ago was its simplicity and the completeness of integration of preclinical and clinical subjects. The beginning student as well as the one about to graduate attended lectures upon anatomy and physiology along with those of medicine, surgery and obstetrics. After attendance at two or three such courses the student was required to pass an examination in all subjects studied before he could be graduated.

The arrangement of the printed program given the student shows a marked difference from that commonly seen today. Now we assign the hour to some subject while in the early days the hours were assigned to the lecturer. It was quite natural for the student to talk about attending Peck's hour, Middleton's or Boucher's instead of surgery, physiology or anatomy. While for the most part the lecturer presented the subject for which he was responsible, nearly all the men were in active practice and it was to be expected that the subject in its presentation would be related to the practical experience of the lecturer. It was often difficult to say whether or not the hour had been of anatomy, surgery or obstetrics. While modern medical education has made great progress by the division of the subjects and with the introduction of "graded" courses it has also lost some of the valuable features of that of long ago. The completeness of the integration of medical subjects together with the submersion of the personality of the instructor by the subject he is supposed to teach are two of the greatest losses.

There is no record of the clinical cases presented during that first year. Such records, if there ever were any, were destroyed in the fire of 1901. In an article entitled "Old Time Clinics: The First Year"*, Dr. Farnsworth states that among the a girl with six toes on each foot, a man with cataract, a case of laparotomy, all operated upon in the medical amphitheatre in South Hall as there was no hospital in Iowa City at the time. Another case referred to by Dr. Farnsworth was that of a boy with "hip joint disease". This case was operated upon at the boy's home, the medical class being invited to be present. Although our record of the cases presented is very meager, clinics in surgery, medicine and head specialties were held cases present was a woman with a large fat tumor, regularly each week during the school year of twenty weeks.

The first course of lectures ended the last of February, 1871, and three persons, Isaac L. Potter of Mount Pleasant, N. H. Tulloss of Iowa City and H. R. Page of Western, qualified for graduation. The requirements for this honor as published in the catalogue of 1869-71 was as follows:

"The candidate must be twenty-one years of age, and of unexceptionable moral character, and must have been engaged in the study of medicine for three years, including attendance upon two courses of lectures, the last of which must have been in the Medical Department of the Iowa State University. Five years of reputable practice will be considered equivalent to one course of lectures. No student will be permitted to graduate who has not pursued practical anatomical study for at least one course. Each candidate for graduation must undergo a satisfactory examination in all of the branches taught in the Institution, and present an acceptable thesis, which must be in the handwriting of the candidate, on a subject connected with some of the departments of medicine. The candidate must notify the Dean in writing during the first week in February of his or her intention to become an applicant for graduation, and at the same time present a thesis and graduating fee. In case of a failure to graduate, the fee and thesis will both be returned.

The ad eundum degree in this Institution may be conferred under the following circumstances: The candidate must be in possession of an accredited diploma, and must present letters from respectable physicians as to moral character and professional standing. An attendance upon lectures from time to time is expected during the session, and a satisfactory examination must be passed through on all subjects taught in the department. From those who receive the ad eundum degree, a matriculation fee and a fee of $20 will be required."

No public examination was held at the end of this first year but beginning with the second class and until 1900 each succeeding graduating class was examined by a visiting board composed of prominent physicians of the state. The examination was oral and upon its completion the visiting committee reported their findings to the faculty with such recommendation or comments that seem

* The Middletonian, May, 1908.

suitable. Occasionally their recommendation was unfavorable for a given candidate and he was then required to pursue an additional course of lectures.

First Annual Commencement,
Medical Department, Iowa State University,
MARCH 1st, 1871

COMPLIMENTARY BANQUET
CLINTON HOUSE.

SOUP.
Oyster. Julienne.
OYSTERS.
Fried. Stewed. Raw.
COLD.
Chicken—Boiled. Dupee's Sugar Cured Ham.
Leg of Mutton—with Capers.
Beef Tongue. Spiced Corn Beef—in Rolls.
ROASTS.
Sirloin of Beef. Turkey—with Cranberry Sauce. Stuffed Chicken.
ENTREES.
Tenderloin of Pork—Fried Apples.
Grenadine of Veal—Tomato Sauce.
Westphalia Ham—Champagne Sauce.
Apple Fritters—Sherry Wine Sauce.
Beef Kidneys—in Border of Rice.
Chicken Giblets—in Wine Sauce.
Minced Liver — a la Royal.
Beef Tongues — Brazed.
Charlotte of Apples.
Apple Meringue.
SALLADS.
Chicken. Lobster. Sardines.
RELISHES.
Leicestershire Sauce. Worcestershire Sauce. Cumberland Sauce.
Pepper Sauce. Pickled Onions. Boston Pickles.
Chow Chow. Cauliflower.
Tomato Catsup. Walnut Catsup. French Mustard. Olives. Cheese.
JELLIES.
Lemon. Wine. Brandy. Strawberry. Vanilla. Cranberry. Apple.
CREAMS.
Italian Cream. Chocolate Cream. Charlotte Russe. Blanc Mange.
CAKES.
Jelly. Corn Starch. Marble. Silver. Gold. Shell. Fruit.
Lady Fingers. Lemon Jumbles.
FRUITS AND CANDIES.
Apples. Oranges. Raisins. Peaches—with Cream. Mixed Candies. Mottoes.
NUTS.
English Walnuts. Filberts. Hazel Nuts. Almonds. Cream Nuts. Pecans.

Coffee. Crackers and Cheese. Tea.

Menu for Commencement Banquet
March 1, 1871

Commencement exercises for the three first graduates were held on the evening of March 1, 1871, in the University chapel which was then located in the building still standing just north of Old Capitol. T. L. Potter was the valedictorian for the class. The Hon. A. S. Kipell, at that time the superintendent of Public Instruction, spoke for the Board of Regents and Professor Robertson gave the faculty address. Following the formal exercises the students, faculty, regents and friends attended a banquet in the Clinton House. What a feast it was, and what a happy occasion, for it marked the successful establishment of a new institution which has for nearly sixty-three years supplied an "adequate training of its students for the practice of general medicine and to furnish such other service to the state as its peculiar facilities might offer".

OBITUARIES

JOHN FRANCIS HERRICK, M.D.
1864-1933

Dr. John F. Herrick was born near Fairfield, Iowa, on February 13, 1864, and died in the Saint Joseph Hospital in Ottumwa, on February 23, 1933. He was educated in the common schools of Jefferson County, attended Parsons College, was graduated in medicine from Keokuk College of Physicians and Surgeons and began the practice of medicine in Ottumwa in 1891, associating with Dr. Jefferson Williamson, a former president of the Iowa State Medical Society. He was married to Miss Mary Sullivan in Ottumwa in 1899, who lived only a few years. Dr. Herrick never remarried, but made his home with his two sisters to the time of his death.



Dr. Herrick possessed qualifications which made him a commanding personality in his community. Intensely religious, he possessed one of the cleanest minds that it has been the privilege of the writer to know. Always hungry for knowledge, when not otherwise employed he read history, the classics and medicine. He had no mind for cheap literature.

He was a profound reader of scientific medicine. His plan was to select a subject, as for example, the ductless glands, and when he had made the selection he read for months and sometimes for years, everything known pertaining to that subject. By this

method he so saturated himself with the literature bearing upon the subject that he could discuss it at any length and could often qualify as an authority in that field.

A believer in organized medicine, he originated what has become known as the Wapello county plan of postgraduate study.

For seventeen years he was the secretary and virtually fixed the policy and plan of study, generally selecting the subjects to be presented by the various members of the society. Each member was expected to present a paper when asked and was also expected to present a thoroughly prepared paper. So it became the custom, and still is, that young and old vie with each other in the presentation of comprehensive studies of their chosen subjects. Dr. Herrick, himself, universally discussed papers and almost without fail showed himself familiar with the literature of the topic under discussion.

He always contended that the county society was a school for the development of its own members so that when called upon they would be capable of presenting an acceptable program in the larger societies.

He was confident and so extended his activities to district, state and national organizations. He appeared frequently on state programs; was president of the state society in 1917; and a member of the Board of Trustees from 1926 to 1930. He was a fellow of the American College of Surgeons, a member and chairman of the executive committee of the Radiological Society of North America, and was always active in that organization. He was a fellow of the American College of Radiology, and a member of the American Roentgen Ray Society and the American Radium Society.

In practice he believed in the efficacy of the x-ray and radium in certain types of malignancies and was able to show clinically, astounding results to verify his beliefs.

Dr. Herrick offered his services when the World War came, although near the age limit. He aided Dr. J. Fred Clarke of Fairfield in the organization of Hospital Unit R and spent fifteen months in France, during which time he was advanced to the rank of Major. Dr. Clarke has written the following tribute to Dr. Herrick:

"I have known Dr. John F. Herrick from boyhood. We were raised in the same neighborhood, near Fairfield. We always have kept closely in touch with each other. When I was commissioned to form a hospital unit for service in France I immediately turned to John Herrick for consultation and cooperation. He gave unstintedly of his time and efforts in helping me form the unit and in securing material and financial assistance from southeastern Iowa in equipping our organization under the Red Cross, previous to its militarization. In France Major Herrick was the chief of my medical staff. He had charge of one entire hospital of several hundred beds. He never thought of hours. He was always faithful to his tasks. He was a true soldier, a highly capable doctor, a loyal friend. I mourn his passing very deeply."

Thus it can justly be said of him: He has lived a full and comprehensive life. A great and good man has joined his fathers but humanity has profited by his having lived.

Chas. B. Taylor, M.D.

MAX ERNEST WITTE, M.D.
1859-1933

Dr. Max E. Witte, one of the veteran Iowa State Hospital superintendents, has recently passed from our midst. For approximately fifty years, Dr. Witte was prominent in the psychiatric field and was not alone a hospital executive, but a man of high scientific attainment. Before assuming the office of superintendent of the Iowa State Hospital for the Insane, at Clarinda, thirty-four years ago, Dr. Witte was a highly appreciated medical officer at the Mount Pleasant State Hospital.



It is safe to say that no officer in the state employ has ever been more frugal or conscientious in the disbursement of state funds and property. He possessed rare traits which made him an invaluable public servant. He was a good financier, and took great pride in the productiveness and scientific maintenance of the hospital farm.

Dr. Witte was always respected by his subordinates. The patients under his care, and their relatives, learned to respect his judgment and honesty. While others may successfully fill the places of those who pass on, it is safe to say that the vacancy created by Dr. Witte's passing will never be filled by a better or more competent man. The members of the Iowa State Medical Society deeply regret the loss of a valued friend and past president.

Frank A. Ely, M.D.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

*ANNUAL REPORT of the Surgeon General of the Public Health Service of the United States for the fiscal year, 1932. United States Government Printing Office, Washington, 1932. For sale by the Superintendent of Documents, Washington, D. C. Price $1.00, cloth.

*CHILDREN'S TONSILS IN OR OUT—A Critical Study of the End Results of Tonsillectomy.—By Albert D. Kaiser, M.D., Associate Professor of Pediatrics, University of Rochester Medical School.—307 pages, illustrated.—J. B. Lippincott Company, 1932. Price, $5.00.

*A COMMUNTY MEDICAL SERVICE ORGANIZED UNDER INDUSTRIAL AUSPICES IN ROANOKE RAPIDS, NORTH CAROLINA—(Pamphlet—Publication of the Committee on the Costs of Medical Care; No. 20)—By I. S. Falk, Ph.D., Don M. Griswold, M.D., Drs. P. H. and Hazel I. Spicer.—With Reports on Certain Phases of the Organization—By David Riesman, M.D., Sc.D., and George P. Muller, M.D.—The University of Chicago Press, Chicago, 1932.—Price, ninety cents.

*FINAL REPORT OF THE COMMISSION ON MEDICAL EDUCATION—Office of the Director of Study, Willard C. Rappleye, A.M., M.D., 630 West 168th St., New York City, 1932.

*FUNCTIONAL DISORDERS OF THE LARGE INTESTINE AND THEIR TREATMENT—By Jacob Buckstein, M.D., Instructor in Gastro-intestinal Roentgenology, Cornell University Medical College—Harper & Brothers, New York and London, 1932.—(Harper's Medical Monographs). Price, $3.00.

*INJURIES OF THE EYE—Diagnosis and Treatment, Forensic Procedures and Visual Economics.—By Harry Vanderbilt Wurdemann, M.D., Sc.D., F.A.C.S., Colonel, Medical Reserve Corps, etc.—Second Edition. 900 pages, with 236 illustrations and 10 color plates. The C. V. Mosby Company, St. Louis, 1932.—Price, $13.50.

*MEDICAL CLINICS OF NORTH AMERICA—(University of California Number—November, 1932). Issued serially, one number every other month. Vol. xvi, No. 3, 195 pages with 31 illustrations. Per clinic year, July, 1932, to May, 1933. Paper, $12.00; cloth, $16.00 net. W. B. Saunders Company, Philadelphia and London, 1932.

*THE MEDICAL SERVICE OF THE HOMESTAKE MINING COMPANY—A Survey of a Community Medical Service operated under Industrial Auspices, By Louis S. Reed, Ph.D.—Published by The University of Chicago Press, Chicago, Ill. Price, 60 cents.

*THE 1932 YEAR BOOK OF RADIOLOGY—Diagnosis, edited by Charles A. Waters, M.D., Associate in Roentgenology Johns Hopkins University; Therapeutics, edited by Ira I. Kaplan, B.S., M.D., Director, Division of Cancer, Department of Hospitals, City of New York. Illustrated. The Year Book Publishers, Inc., Chicago, 1932. Price, $6.00.

*NURSING SERVICES AND INSURANCE FOR MEDICAL CARE IN BRATTLEBORO, VERMONT—By Allon Peebles, Ph.D., and Valieria D. McDermott, With an Evaluation of the Nursing Program by Violet H. Hodgson, R.N., Assistant Director, and Katharine Tucker, R.N., General Director of the National Organization for Public Health Nursing. The University of Chicago Press, Chicago, Illinois.—Price, 60 cents.

*OUTLINE OF PREVENTIVE MEDICINE—For Medical Practitioners and Students—Second Edition—462 pages—Paul B. Hoeber, Inc., New York, 1932.—Price, $5.00.

*PICTORIAL MIDWIFERY—By Comyns Berkeley, M.C., M.D., F.R.C.P., F.R.C.S., Consulting Obstetric Surgeon of the City of London Maternity Hospital, to Middlesex Hospital, and to Chelsea Hospital for Women; Examiner in Midwifery and Diseases of Women to the University of Cambridge. Second edition (1932) William Wood & Co.—New York.—Price, $3.00.

*THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS GENERAL SURGERY—Edited by Evarts A. Graham, A.B., M.D., professor of surgery, Washington University of Medicine; surgeon-in-chief of the Barnes Hospital and of the Children's Hospital, St. Louis. Series 1932. The Year Book Publishers, Chicago.

*POLIOMYELITIS—A Survey Made Possible by a Grant from the International Committee for the Study of Infantile Paralysis, organized by Jeremiah Milbank. Illustrated, 526 pages. The Williams & Wilkins Company, Baltimore, 1932. Price, $6.00.

*PRACTICAL OBSTETRICS FOR STUDENTS AND PRACTITIONERS—By P. Brooke Bland, M.D., Professor of Obstetrics, Jefferson Medical College; assisted by Thaddeus L. Montgomery, M.D., Associate in Obstetrics, Jefferson Medical College.—730 pages, illustrated with 516 engravings, including 21 colored plates.—F. A. Davis Company, Philadelphia, 1932.

*RADIOLOGIC MAXIMS — By Harold Swanberg, B.S., M.D., F.A.C.P.—Editor of *The Radiological Review;* with a foreword by Henry Schmitz, A.M., M.D., LL.D., F.A.C.S., Professor of Gynecology and Head of the Department, Loyola University School of Medicine.—Radiological Review Publishing Company, Quincy, Illinois, 1932. Price, $1.50.

*SURGICAL CLINICS OF NORTH AMERICA (Philadelphia Number, December, 1932. Issued serially, one number every other month.) Vol. xii, No. 6. Index Number. 280 pages with 110 illustrations. Per clinic year (February, 1932, to December, 1932). Paper, $12.00; cloth, $16.00 net. W. B. Saunders Company, Philadelphia and London, 1932.

*SYNOPSIS OF GYNECOLOGY—Based on the Textbook, Diseases of Women—By Harry Sturgeon Crossen, M.D., F.A.C.S., Professor of Clinical Gynecology, Washington University Medical School; and Robert James Crossen, M.D., Instructor in Clinical Gynecology and Obstetrics, Washington University Medical School.—227 pages, with 110 illustrations. The C. V. Mosby Company, St. Louis, 1932.—Price, $2.75.

*TWENTIETH ANNUAL REPORT OF THE MEDICAL DEPARTMENT, UNITED FRUIT COMPANY. General Offices: Boston, Massachusetts. 1931. Gratis on request.

* Book Review in this issue.

BOOK REVIEWS

ANNUAL REPORT

Of the Surgeon General of the Public Health Service of the United States for the fiscal year, 1932. United States Government Printing Office, Washington, 1932. For sale by the Superintendent of Documents, Washington, D. C. Price, $1.00, cloth.

The report indicates that in spite of the unfavorable economic conditions of the last three years the general health of the people of the United States as reflected by mortality rates has been favorable. A new low record has been established for tuberculosis. A lowered incident of smallpox in 1931 was recorded. Poliomyelitis appeared in epidemic form in the northeastern states. Typhoid fever was less prevalent. Pellagra, diphtheria, epidemic cerebral spinal meningitis and Rocky Mountain spotted fever all showed less morbidity and mortality. Tularemia and undulant fever each showed increases, probably due to better diagnosis.

The influenza death rate was low. Cholera, yellow fever, and plague were not reported in continental United States during the year 1931. These and a thousand other facts concerning public health in the United States are covered in this Annual Report of the Public Health Service.

CHILDREN'S TONSILS IN OR OUT

A Critical Study of the End Results of Tonsillectomy.—By Albert D. Kaiser, M.D., Associate Professor of Pediatrics, University of Rochester Medical School.—307 pages, illustrated.—J. B. Lippincott Company, 1932. Price, $5.00.

A score of years ago public attention was directed

toward the problems of conserving child health. As a corollary to this program, early attention was directed toward the unfavorable effect which diseased tonsils had upon the child's development. As the movement for child health grew, more and more tonsillectomies were performed. It appears that no one has, heretofore, undertaken to determine scientifically by a follow-up on tonsillectomized individuals what the end result of this practice has been.

The author of this volume has undertaken such a study on a group of approximately five thousand children over a ten-year period. He has reported in detail his observations of this group, as compared with a similar group of unoperated individuals. It is of interest to note that, while the group of tonsillectomized children suffered less from sore throats, cervical adenitis, otitis media, scarlet fever, diphtheria, rheumatic fever, and heart disease, this group was more prone to respiratory infections such as laryngitis, bronchitis, and pneumonia. The tonsillectomized group showed thirty per cent less rheumatic manifestations. In that group of individuals operated after the onset of symptoms, no benefits were noted.

This is the only scientific comparative study on the subject of tonsils in and out, which has come to our attention.

A COMMUNITY MEDICAL SERVICE ORGANIZED UNDER INDUSTRIAL AUSPICES IN ROANOKE RAPIDS, NORTH CAROLINA

(Pamphlet—Publication of the Committee on the Costs of Medical Care; No. 20)—By I. S. Falk, Ph.D., Don M. Griswold, M.D., Drs. P. H. and Hazel I. Spicer; with Reports on Certain Phases of the Organization, by David Riesman, M.D., Sc.D., and George P. Muller, M.D.—The University of Chicago Press, Chicago, 1932.—Price, ninety cents.

The committee selected Roanoke Rapids, a town in the northern part of North Carolina, for a special survey since the plan of organized medical service operating there was one which provided medical care on a group plan with group payments and one which had been in operation sufficiently long (since 1897), to justify conclusions.

The Roanoke Rapids plan, operating for the employees of three cotton mills and their dependents, originally cost the employees ten cents per week. In 1924 the fee was raised to twenty-five cents per week and school teachers and nurses were allowed to enter the plan. These latter groups were charged twenty-five dollars and twenty-four dollars, respectively, per year. Of this amount one-fifth was assigned to the physicians for their professional service and four-fifths was given to the hospital. Physicians operating under this plan received an average net income of $8,409 in 1930, while general practitioners throughout the United States received $3,900 for the same period, partial specialists, $6,100, and complete specialists $10,000.

The report reviews both the advantages and disadvantages of the plan, with the conclusion that the advantages far outnumber the disadvantages.

FINAL REPORT OF THE COMMISSION ON MEDICAL EDUCATION

Office of the Director of Study, Willard C. Rappleye, A.M., M.D., 630 West 168th St., New York City, 1932.

The final report of the Commission on Medical Education has been discussed editorially in the JOURNAL. The report covers an extensive research into the medical problems and practices, both of this country and of Europe; a careful inquiry into the medical needs of modern society; and finally certain conclusions and recommendations which, if followed, will adjust the medical curriculum to meet the discovered needs.

The report is the result of five years' intensive study conducted by an eminent group of investigators, well prepared for their task. That it is authoritative cannot be questioned. For any physician interested in modern medical teachings, in the problems of better fitting physicians to serve their community, and in the problems of rendering an efficient and adequate medical service this volume is commended.

FUNCTIONAL DISORDERS OF THE LARGE INTESTINE AND THEIR TREATMENT

By Jacob Buckstein, M.D., Instuctor in Gastro-intestinal Roentgenology, Cornell University Medical College.—Harper & Brothers, New York and London, 1932.—(Harper's Medical Monographs). Price, $3.00.

This practical monograph on disorders of the large intestine has been prepared by a physician whose experience in more than thirty thousand cases of intestinal disorders seen in Bellevue Hospital places him in an unusually secure position in viewing these problems.

After a short discussion of the normal colon, the author presents the various causes of constipation, its symptomatology and treatment, passing then to a discussion of the mobile cecum, enteroptosis, and the differential diagnosis of right side pains. In the closing chapters of the book he discusses hypermotility of the colon with associated diarrhea, gaseous distention of the large intestine, and megacolon.

In connection with his discussions of constipation he stresses diet, the use of laxatives and mineral oil, and presents in detail the exercises of McGovern, ending his discussion with a statement concerning the role of surgery in the treatment of constipation.

Particularly valuable are the very complete diet lists furnished by the author in connection with his discussion of fermentative diarrhea in which he car-

ries his patient successively through two weeks of daily management.

The closing section of the book is devoted to a reproduction of x-ray plates illustrating the various disorders discussed in the text.

The handy form of this volume, coupled with its thoroughness, will appeal to every physician interested in the subject.

INJURIES OF THE EYE

Diagnosis and Treatment, Forensic Procedures and Visual Economics.—By Harry Vanderbilt Wurdemann, M.D., Sc.D., F.A.C.S., Colonel, Medical Reserve Corps, etc.—Second Edition. 900 pages, with 236 illustrations and 10 color plates. The C. V. Mosby Company, St. Louis, 1932.—Price, $13.50.

This second edition of Dr. Wurdemann's encyclopedic treatise on "Injuries of the Eye" is timely, inasmuch as many advances have been made in this subject since the publication of his first edition in 1911. The present work discusses exhaustively all of the common occular injuries met in both industrial practice and those occurring in the more ordinary pursuits of life. The author, because of his long experience in the United States Army and his intimate contact with large industrial concerns, has a background for this discussion which is both authoritative and complete.

The first section of the work deals with general injuries, their mechanism, diagnosis, and treatment; while Part II presents a discussion of injuries to the special structures of the eye. A third section of about one hundred pages is devoted to forensic medicine, considering eye injuries from the medico-legal viewpoint and reviewing protective legislation, pensions, and accident insurance as well as the economics of damage and indemnity.

The volume is effectively illustrated by 792 black and white reproductions, the greater part drawn from the author's private collection, together with ten full color plates illustrating, for the most part, changes resulting in the fundus of the eye. This encyclopedic work will immediately appeal to the specialist or the physician engaged in an industrial practice in which occular injury is common.

MEDICAL CLINICS OF NORTH AMERICA

(University of California Number—November, 1932). Issued serially, one number every other month. Vol. xvi, No. 3, 195 pages with 31 illustrations. Per clinic year, July, 1932, to May, 1933. Paper, $12.00; cloth, $16.00 net. W. B. Saunders Company, Philadelphia and London, 1932.

Digressing from the usual plan of publishing clinics from many authors in a single volume, this volume of Medical Clinics is devoted exclusively to the clinic held by Dr. Jonathan C. Meakins as visiting lecturer at the University of California during the school year of 1931-32. The clinics are divided into three classifications: (1) theatre clinics; (2) clinical lectures; (3) clinical-pathologic conferences.

Outstanding among the theatre clinics are those dealing with dyspnea, cyanosis, and edema. Two clinical lectures are presented, The Treatment of Cardiac Irregularities and Jaundice and Blood Pressure. The clinical-pathologic conferences deal with cerebral lesions in an elderly man, two cases of disseminated tuberculosis and thyrotoxicosis.

The volume is illustrated.

THE MEDICAL SERVICE OF THE HOMESTAKE MINING COMPANY

A Survey of a Community Medical Service operated under Industrial Auspices, by Louis S. Reed, Ph.D.—Published by The University of Chicago Press, Chicago, Ill. Price, 60 cents.

The last year's study of the Committee on the Costs of Medical Care was directed largely toward communities in which experimental programs for medical care were in operation. This report is of such a community.

In selecting this particular community, the committee states as its reasons: (a) it offered extensive medical care, including hospitals and home care of all employees of the company and their families; (2) it appeared to have the necessary facilities and equipment to give care of good quality; and (3) preliminary contacts indicated that useful financial and professional records were available.

For the year of 1930, 5,400 persons were cared for by six full time physicians in a twenty-six bed hospital owned and operated by the company. The cost for the year was $79,325.63, or $14.88 per person. The medical service is, on the whole, considered satisfactory by its patients, although some individuals utilize outside facilities at their own expense.

"In the opinion of the physicians concerned, a direct financial relation between physician and patient —the payment of a fee for each service—is neither essential to the performance of good service, nor to the maintenance of a close and continuing personal relationship."

THE 1932 YEAR BOOK OF RADIOLOGY

Diagnosis, edited by Charles A. Waters, M.D., Associate in Roentgenology, Johns Hopkins University; Therapeutics, edited by Ira I. Kaplan, B.S., M.D., Director, Division of Cancer, Department of Hospitals, City of New York. Illustrated. 750 pages. The Year Book Publishers, Inc., Chicago, 1932. Price, $6.00.

Since 1901 the Year Book publishers have annually prepared a series of condensations of medical litera-

ture covering not only the field of general medicine and surgery, but also several of the specialties. For the first time, they have produced a summary of the year's literature in radiology, which is being presented to the profession under the editorship of Charles A. Waters, of Johns Hopkins University, and Ira I. Kaplan, of the Department of Hospitals, New York City. This joint editorship will assure the completeness and thoroughness of the survey.

The volume is logically divided into a section on radiologic diagnosis and a second section on radiotherapeutics. The first section presents many of the newer developments in radiologic diagnosis, such as gallbladder visualization, arteriography, intravenous urography, visualization of the reticulo-endothelial system of the liver, spleen, and bone-marrow, and the radiologic pelvimetry and visualization of the fetus in utero. Timely subjects, such as surgery versus radiation for cancer of the breast or uterus, are thoroughly discussed in the section on radiotherapeutics.

The reviewer anticipates a hearty reception by the general practitioner and specialist for this newer edition to the Year Book family. Certainly, the physician interested in this field of work should have this important volume.

NURSING SERVICES AND INSURANCE FOR MEDICAL CARE IN BRATTLEBORO, VERMONT

By Allon Peebles, Ph.D., and Valieria D. McDermott, With an Evaluation of the Nursing Program by Violet H. Hodgson, R.N., Assistant Director, and Katharine Tucker, R.N., General Director of the National Organization for Public Health Nursing. The University of Chicago Press, Chicago, Illinois.—Price, 60 cents.

This publication of the Committee on the Costs of Medical Care presents not only a survey of a nursing service and an insurance program, but also attempts an evaluation of the nursing program by officials of the National Organization for Public Health Nursing.

The benefit association in Brattleboro, under which the medical service is operated for annual dues amounting to $5.00 for a single person and $7.50 for a married couple, provides for operations and hospitalization in excess of $30 and not in excess of $300, including the surgeon's charge for the operation. They further provide that for non-surgical cases they will pay one-half of the cost of the regular hospital accommodations. The committee concludes that the association not only benefits the members, but the physicians, the nurses, and the local hospital as well.

The officers of the National Organization for Public Health Nursing present the fundamental aspects of the modern nursing problem in a fashion which the reviewer has not seen elsewhere. On a basis of this carefully laid foundation, they conclude that "the Brattleboro program is evidence of the place the trained attendant may take in the whole picture," but indicate "the need of further development of potentialities still to be realized."

OUTLINE OF PREVENTIVE MEDICINE

For Medical Practitioners and Students—Second Edition—462 pages—Paul B. Hoeber, Inc., New York, 1932.—Price, $5.00.

This small treatise outlining the principles and practice of preventive medicine was originally published in 1929. It met with such hearty approval that the demand has necessitated a second revised and enlarged edition which has just been released by the publishers. The present volume of some 450 pages has been prepared by twenty-four distinguished contributors who, under the guidance of an editorial committee authorized by the New York Academy of Medicine, have presented the most terse, yet comprehensive discussion of preventive medicine which has come to our attention. It summarizes all that is known about the prevention of illness or its sequelae, in every branch of clinical medicine.

The physician who can afford an extensive library on this subject will find this book invaluable in summarizing the voluminous material secured through other reading. For the physician who must limit his purchases in this branch of medicine the volume is recommended as the purchase of choice.

PICTORIAL MIDWIFERY

By Comyns Berkeley, M.C., M.D., F.R.C.P., F.R.C.S., Consulting Obstetric Surgeon of the City of London Maternity Hospital, to Middlesex Hospital, and to Chelsea Hospital for Women; Examiner in Midwifery and Diseases of Women to the University of Cambridge. Second edition (1932) William Wood & Co.—New York.—Price, $3.00.

This small, compact pictorial atlas of midwifery, now in its second revised edition, is intended chiefly as an adjunct to the teaching of obstetrics to nurses, for the training of midwives, medical students, and the guidance of general practitioners. The fact that this book contains 257 carefully planned drawings explains the reluctance with which it is laid aside.

It is divided into six sections: Anatomy of the Mother, Child and Secundines; Pregnancy; Labor; Care of the New Born Child; X-ray Plates Showing Different Positions; and Instruments Used in Obstetric Operations.

While intended as a teaching atlas for medical students, nurses, and midwives, any practitioner doing obstetrics will gain much valuable information in a very unique manner by possessing this book.

F. W. R.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS GENERAL SURGERY

Edited by Evarts A. Graham, A.B., M.D., professor of surgery, Washington University of Medicine; surgeon-in-chief of the

Barnes Hospital and of the Children's Hospital, St. Louis. Series 1932. The Year Book Publishers, Chicago.

The editor of this volume epitomizes in his preface four important changes in surgical thought introduced during the past year. He indicates that spinal anesthesia heretofore lauded because of the infrequency of lung complications has been demonstrated to predispose to postoperative atelectasis of the lung.

Extensive studies of the bacillus Welchii indicate that as high as one per cent of all individuals carry the organism in their intestinal canal, and that the organism has been recovered from the skin both before and after the use of ordinary skin disinfectants. This leads to the thought that surgical tetanus may be accounted for on this basis, rather than discrediting the catgut employed in the surgical procedure.

In the hands of our English colleagues radium therapy has proved as effective in the treatment of carcinoma of the breast as surgery.

He directs attention to a new operation of cutting the scalene muscles, called scaleniotomy, as a practical procedure for immobilizing the apex of the lung in pulmonary tuberculosis.

Maintaining the high standard established in this publication, this volume brings to the reader a summary of the year's developments and best thoughts in surgical practice from all sources. Its editorship under Dr. Graham assures its thoroughness and completeness.

POLIOMYELITIS

A Survey Made Possible by a Grant from the International Committee for the Study of Infantile Paralysis, organized by Jeremiah Milbank. Illustrated, 526 pages. The Williams & Wilkins Company, Baltimore, 1932. Price, $6.00.

This extensive and valuable survey of the subject of poliomyelitis, representing some four years of intensive work by a distinguished group of workers, summarizes the known observations on the study of infantile paralysis up to this time. Over 8,000 separate citations in the literature to this disease have been carefully reviewed and evaluated by the committee. No phase of the subject has been left untouched.

Succeeding chapters of the text treat upon the historical aspect of the disease, its etiology, resistance and immunity, symptomatology, treatment, pathology, and epidemiology. The chapter on treatment may appeal more strongly to the general practitioner, since one frequently feels a helplessness even when the diagnosis of this disease has been established.

As a result of a study of more than one thousand cases of poliomyelitis in which the findings could be accepted as being without bias, the committee concludes that "Convalescent serum shows nothing to indicate the therapeutic value of the serum, either in reducing case fatality or in preventing paralysis." The closing chapter of the volume is devoted to bibliography covering nearly fifty pages of text, giving reference to all of the literature quoted throughout the survey. The volume is unqualifiedly recommended as the most outstanding, most fair, and most comprehensive of any volume which has yet appeared on the subject of poliomyelitis.

PRACTICAL OBSTETRICS FOR STUDENTS AND PRACTITIONERS

By P. Brooke Bland, M.D., Professor of Obstetrics, Jefferson Medical College; assisted by Thaddeus L. Montgomery, M.D., Associate in Obstetrics, Jefferson Medical College.—730 pages, illustrated with 516 engravings, including 21 colored plates.—F. A. Davis Company, Philadelphia, 1932.

There are a number of books available today on the subject of obstetrics, but these volumes divide themselves rather sharply into two groups. The first are those standard texts long established as outstanding and authoritative, whose size has grown through each succeeding edition until they have become encyclopedic in character. A second group designed primarily as compends or at least classroom guides treat the subject with far too great brevity to be of much service except when used conjointly with a more elaborate text.

This volume has been designed by its author to meet a need for a text covering a considerably greater territory than the briefer texts on this subject, and yet falling considerably short of the encyclopedic size of many of the older texts. It has further been the object of the author to present his subject from a strictly modern point of view. He has endeavored to provide the student with a concise textbook, the practitioner with a dependable guide, and the specialist with an exposition of his personal views on current obstetric problems. In each respect the author has quite fully accomplished his avowed purpose.

The volume comprises only 700 pages, which bespeaks its conciseness. Its completeness is manifest in the chapter title which begins with "The anatomical and physiological consideration . . ." and discusses successively the various phases of pregnancy and labor in both the normal and abnormal cases, presenting the operative procedures, the diseases and disorders of the new-born, and concluding with a chapter on obstetric jurisprudence. A closing section of the book is devoted to referred reading, suggesting to the reader advanced study along the many avenues of obstetric investigation and practice.

Special mention should be made of the numerous illustrations used throughout the volume. It has rarely been our privilege to review a text so adequately and so handsomely illustrated. The volume is especially recommended to those physicians desiring a complete, modern and authoritative guide for practical obstetrics.

F. W. R.

RADIOLOGIC MAXIMS

By Harold Swanberg, B.Sc., M.D., F.A.C.P. —Editor of *The Radiological Review*.—With a foreword by Henry Schmitz, A.M., M.D., LL.D., F.A.C.S., Professor of Gynecology and Head of the Department, Loyola University School of Medicine.—Radiological Review Publishing Company, Quincy, Illinois, 1932. Price, $1.50.

During the past six years there has appeared each month in *The Radiological Review*, a page devoted to "Radiologic Maxims," edited by the author. This small book is practically a compilation of these maxims and is presented by the author without claim of originality.

Since radiology is a comparatively new specialty in the medical field, many practitioners are not acquainted with either its scope of usefulness or its limitations. It is with this in mind that the author has compiled this small volume, setting forth in a terse fashion the multitude of useful procedures in the radiologic field applicable to the diagnosis or treatment of disease and, at the same time, has stated in concise terms the limitations of radiology.

Every radiologist will be glad to possess in book form the maxims which have appeared serially in the journal. The general practitioner will prize the book because of its terseness and accuracy in discussing radiology as applied today in the diagnosis and treatment of disease. The book has been approved by a group of eminent radiologists, which assures its authenticity.

SURGICAL CLINICS OF NORTH AMERICA

(Philadelphia Number, December, 1932. Issued serially, one number every other month.) Vol. xii, No. 6. Index Number. 280 pages with 110 illustrations. Per clinic year (February, 1932, to December, 1932). Paper, $12.00; cloth, $16.00 net. W. B. Saunders Company, Philadelphia and London, 1932.

This number as usual covers a wide range of subjects. Drs. John Berton Carnett and John C. Howell present an excellent article on the metastases in gastric carcinoma. "Railway spine" is exhaustively treated with special attention to differential diagnosis in cases with back injury.

Dr. T. Turner Thomas describes the technic of an operation for the care of large inguinal hernias with special reference to the direct and recurrent use of an ordinary nail to hold the rectus sheath and muscles over the defect.

Dr. Edward J. Klopp discussed the Stewart incision for radical amputation of the breast, giving the details of technic. The surgical significance of gastro-intestinal hemorrhage is thoroughly treated by Dr. Eldridge L. Eliason from the standpoint of diagnosis and treatment.

Dr. Adolph A. Walkling has an excellent article on the treatment of certain fractures in children regarding the end results.

Dr. V. W. Murray Wright presents the subject of infections in the dangerous circle of the face, considering especially cauterization of the angular vein with prevention of thrombosis in the cavernous sinus. This is an excellent practical number.

F. W. F.

SYNOPSIS OF GYNECOLOGY

Based on the Textbook, Diseases of Women—By Harry Sturgeon Crossen, M.D., F.A.C.S., Professor of Clinical Gynecology, Washington University Medical School; and Robert James Crossen, M.D., Instructor in Clinical Gynecology and Obstetrics, Washington University Medical School.—227 pages, with 110 illustrations. The C. V. Mosby Company, St. Louis, 1932.—Price, $2.75.

This book is virtually an outline of that large and excellent textbook on gynecology by this same author. It is not intended for the use of one limiting his work to gynecology; being much too brief for practical use in such a specialty. It is intended for the general practitioner as a synopsis from which he may review the general symptoms and treatment of his gynecologic cases. It is also intended for the specialist in other lines of work who needs a very brief summary of gynecologic conditions that may occur among his patients. For the last two purposes the book is excellent.

The book takes up in brief but detailed form the entire field of gynecology such as: general gynecologic examinations, diagnosis and treatment, and special conditions of each genital organ, such as infections, new growths and mechanical pathology.

This book is well indexed and illustrated.

F. W. R.

TWENTIETH ANNUAL REPORT OF THE MEDICAL DEPARTMENT, UNITED FRUIT COMPANY

General Offices: Boston, Massachusetts. 1931. Gratis on request.

The United Fruit Company, through its many interests in Central and South America, controls the health of a population estimated at 133,000 people. They have maintained a very efficient and complete medical department which has conducted valuable researches regarding sanitation and the tropical diseases common to this area.

As a contribution to medical literature, the United Fruit Company each year publishes a very complete report of the activities of their medical department, copies of which are distributed to the various medical libraries and to the publishing offices of various medical journals.

The twentieth annual report, covering the fiscal year of 1931, contains many reports of unusual and rare diseases, chiefly those occurring in the tropics.



William W. Bowen, M.D.
President
Iowa State Medical Society
1932-1933

The JOURNAL
of the
Iowa State Medical Society

VOL. XXIII — DES MOINES, IOWA, APRIL, 1933 — No. 4

IOWA STATE MEDICAL SOCIETY

Organized 1850

Eighty-second Annual Session

Des Moines, Iowa, May 10, 11, 12, 1933

Do not fail to Register. Registration Bureau—Hotel Fort Des Moines

PROGRAM

OPENING EXERCISES

Wednesday, May 10

8:15 a. m.

Presentation of Gavel—
CHANNING G. SMITH, MD., Granger

Call to Order by the President—
WILLIAM W. BOWEN, M.D., Fort Dodge

Greetings—
MAYOR DWIGHT N. LEWIS, Des Moines
FRED A. MOORE, M.D., President Elect, Polk County Medical Society

Response—
ELLIOTT C. COBB, M.D., Sioux City,
Second Vice President, Iowa State Medical Society

SCIENTIFIC PROGRAM

Wednesday, May 10

8:30 a. m.

1. Medical Clinic—
DAVID P. BARR, M.D., St. Louis, 8:30-9:15
2. Surgical Clinic—
HARRY M. RICHTER, M.D., Chicago, 9:15-10:00
3. Agranulocytosis—
FREDERICK H. LAMB, M.D., Davenport, 10:00
Discussion by BENJAMIN F. WOLVERTON, M.D., Cedar Rapids
4. Appendicitis: Its Increasing Mortality—
GEORGE M. CRABB, M.D., Mason City 10:25
Discussion by EDWARD D. ALLEN, M.D., Hampton
5. How Can the Present Mortality from Appendicitis Be Lowered—
CLARENCE L. HEALD, M.D., Sigourney 10:50
Discussion by CARL J. LOHMAN, M.D., Burlington
6. The Perforated Appendix—
FREDERICK W. MULSOW, M.D., Cedar Rapids, 11:15
7. The Malarial Therapy of Neurosyphilis Other Than Dementia Paralytica—
WILLIAM E. ASH, M.D., Council Bluffs 11:25
Discussion by LEONARD P. RISTINE, M.D., Cherokee

Wednesday, May 10

1:30 p. m.

8. Address in Surgery—Radical Gastric Surgery in Peptic Ulcer—
HARRY M. RICHTER, M.D., Professor of Surgery, Northwestern University College of Medicine, Chicago
9. The Use and Abuse of Cesarean Section—
HARRY W. VINSON, M.D., Ottumwa, 2:00
Discussion by REGNAR M. SORENSEN M.D., Cumberland
10. Leads in Diagnosis—
ALBERT A. SCHULTZ, M.D., Fort Dodge, Chairman of the Medical Section, 2:25
11. The Treatment of Functional Menstrual Irregularities in Young Women—
DELLA G. DRIPS, M.D., Mayo Foundation, Rochester, 2:55
Guest, State Society of Iowa Medical Women
12. Laboratory Technic and the Practice of Medicine—
ALLEN C. STARRY, M.D., Sioux City, 3:25
Discussion by ALDIS A. JOHNSON, M.D., Council Bluffs
13. Reporting a Case of Ruptured Renal Aneurism with Complete Recovery After Operation—
JOHN E. BRINKMAN, M.D., Waterloo, 3:50

Wednesday Evening, May 10

8:00 p. m.

Entertainment and Smoker
West Ballroom—Hotel Fort Des Moines

Thursday, May 11

8:30 a. m.

14. Surgical Clinic—
HARRY M. RICHTER, M.D., Chicago, 8:30-9:15

15. Medical Clinic—
DAVID P. BARR, M.D., St. Louis, 9:15-10:00

16. Rupture of Wounds Following Abdominal Operations—
GUY T. MCCAULIFF, M.D., Webster City, Chairman of the Surgical Section, 10:00

17. Labor Complicated by Misplaced Placenta—
JAMES F. TAYLOR, M.D., Sioux City, 10:30
Discussion by FRED STERNAGEL, M.D., Williamsburg

18. Tuberculosis in Ocular Disease—
WILLIAM C. FINNOFF, M.D., Denver
Guest Eye, Ear, Nose and Throat Section, 10:55

19. The Present Status of the Medical Profession—
WILLIAM W. BOWEN, M.D., Fort Dodge, 11:25

Thursday, May 11

1:30 p. m.

20. Address in Medicine—The Functions of the Anterior Lobe of the Hypophysis
DAVID P. BARR, M.D., Busch Professor of Medicine, Washington University School of Medicine, St. Louis, Missouri

21. Diagnosis of Mild and Atypical Cases of Exophthalmic Goiter—
WILLIAM A. PLUMMER, M.D., Rochester, 2:00

22. Diagnosis and Management of the Toxic Thyroid—
THOMAS F. THORNTON, M.D., Waterloo, 2:20

23. Diagnosis of Hypothyroidism—
CLARENCE W. BALDRIDGE, M.D., Iowa City, 2:40
Discussion of 21, 22, and 23 by FRANK J. ROHNER, M.D., Iowa City

24. Hyperinsulinism: Case Reports and Discussion of Medical and Surgical Treatment—
JAMES A. EVANS, M.D., La Crosse, Wisconsin, 3:10
Discussion by EDWIN B. WINNETT, M.D., Des Moines

25. Surgical Accidents—
ROYAL A. BECKER, M.D., Atlantic, 3:35
Discussion by JAMES J. NOONAN, M.D., Marshalltown

Summary by Medical Guest—
DAVID P. BARR, M.D., St. Louis, 4:00

Thursday Evening, May 11

ANNUAL BANQUET

Hotel Fort Des Moines

6:30 p. m.

Toastmaster—Felix A. Hennessy, M.D., Calmar

President's Address: The Progress of Medicine—
WILLIAM W. BOWEN, M.D., Fort Dodge

Address by the President Elect—
CHARLES B. TAYLOR, M.D., Ottumwa

Address—
B. J. PRICE, Attorney, Fort Dodge

Music and Entertainment

Friday, May 12

8:30 a. m.

Clinical Presentations

26. Eczema in Infancy—
HARRY C. WILLET, M.D., Des Moines, 8:30

27. Non-diphtheritic Laryngitis—
DENNIS H. KELLY, M.D., Des Moines, 8:45

28. Nephritis in Children—
MORGAN J. FOSTER, M.D., Cedar Rapids, 9:00

29. Rheumatic Heart Disease—
ROLAND W. STAHR, M.D., Fort Dodge, 9:15

30. Tuberculosis in Infancy—
ARNOLD M. SMYTHE, M.D., Des Moines, 9:30

31. Toxoid in Diphtheric Prevention—
BENNETT A. MELGAARD, M.D., Sioux City, 9:45

32. Infant Feeding—
ROBERT O. HUGHES, M.D., Ottumwa, 10:00

33. Bronchoscopy—
JAMES A. DOWNING, M.D., Des Moines, 10:15

34. Bronchiectasis—
MARK L. FLOYD, M.D., Iowa City, 10:30

35. Blood Transfusions: Indications for—
LEE F. HILL, M.D., Des Moines, 10:45

36. Thymic Disturbances in Children—
GLEN E. HARRISON, M.D., Mason City, 11:00

37. Treatment of Pneumonia—
JOSEPH B. THORNELL, M.D., Council Bluffs, 11:15

Report of House of Delegates
Installation of President

OPHTHALMOLOGY, OTOLOGY AND RHINOLARYNGOLOGY

Wednesday, May 10

1:30 p. m.

Broadlawns Polk County Hospital

Presentation of cases with Eye Pathology by the Staff: Doctors H. I. McPherrin, Grace O. Doane, John H. Tait, George S. Marquis, C. C. Jones, C. C. Walker, T. A. Minassian, and H. J. McCoy.

Cases will be especially discussed by Cecil S. O'Brien, M.D., University of Iowa, Iowa City.

Thursday, May 11

9:30 a. m.

The Cabin—Hotel Fort Des Moines

1. Chairman's Address: The Rational Viewpoint in Medical Practice—
HAROLD J. MCCOY, M.D., Des Moines

2. Intra-ocular Foreign Body: An Unusual Case Report—
JOHN E. ROCK, M.D., Davenport
Discussion by GEORGE A. MAY, M.D., Des Moines

3. Retinal Blastoma—
FRANK L. SECOY, M.D., Sioux City
Discussion by

4. Facial Neuralgias: Trigeminal, etc.—
WALTER D. ABBOTT, M.D., Des Moines

5. Tuberculosis in Ocular Disease: The Rôle Played by Tuberculosis in Certain Ocular Inflammations—
Delivered before the General Session—
WILLIAM C. FINNOFF, M.D., Denver
Guest Eye, Ear, Nose and Throat Section

Noon

Luncheon

Guests of Des Moines Academy of Ophthalmology, Otology and Rhinolaryngology

GUEST SPEAKERS

Eighty-second Annual Session



HARRY M. RICHTER, M.D.
Chicago, Illinois



DAVID P. BARR, M.D.
St. Louis, Missouri



DELLA G. DRIPS, M.D.
Rochester, Minnesota



WILLIAM C. FINNOFF, M.D.
Denver, Colorado

Thursday, May 11

1:45 p. m.

6. Allergy—
HENRY I. MCPHERRIN, M.D., Des Moines
Discussion by RALEIGH R. SNYDER, M.D., Des Moines

7. Infections of the Zygomatic Fossa—
JACK V. TREYNOR, M.D., Council Bluffs
Discussion by CECIL C. GRANT, M.D., Cedar Falls

8. The Running Ear—
BEN G. DYER, M.D., Ames
Discussion by ELLIS G. LINN, M.D., Des Moines

9. Histology of the Inner Ear (Lantern Slides)—
DEAN M. LIERLE, M.D., Iowa City

ENTERTAINMENT

Wednesday, May 10

8:00 p. m.

Smoker and entertainment
West Ballroom—Hotel Fort Des Moines

Auxiliary card party, Hotel Fort Des Moines
All visiting ladies invited

8:00 p. m.

Thursday, May 11

1:00 p. m.

Auxiliary Luncheon, Wakonda Country Club
All visiting ladies invited

6:30 p. m.

Annual banquet, Hotel Fort Des Moines
Physicians, their wives and guests

ARRANGEMENTS COMMITTEE

WILLIAM W. BOWEN.....Fort Dodge
ROBERT L. PARKER.....Des Moines
E. B. WINNETT.....Des Moines
FRED MOORE.....Des Moines
LEONARD A. WEST.....Des Moines

LOCAL COMMITTEES

FINANCE

Oliver J. Fay — Donald H. Kast
Loren K. Meredith

SURGICAL CLINICS

Frank W. Fordyce — William B. Hornaday
N. Boyd Anderson — Lester D. Powell

MEDICAL CLINICS

Harry A. Collins — Dennis H. Kelly
Audra D. James — Clement A. Sones

ENTERTAINMENT

Leonard A. West — Walter D. Abbott
Frank W. Fordyce — Floyd B. Langdon
Harold C. Bone — Wilbert W. Bond

HOUSE OF DELEGATES

Oak Room—Hotel Fort Des Moines

Wednesday, May 10

3:30 p. m.

Roll Call
Approval of Minutes of Friday Morning Session, 1932
Report of Secretary
Report of Treasurer
Report of Council
Report of Council Committees
- Speakers Bureau Committee—
  DANIEL J. GLOMSET, Des Moines, Chairman
- Committee on Cancer Literature—
  WILLIAM JEPSON, Sioux City, Chairman
- Medical Education and Hospitals Committee—
  ARTHUR W. ERSKINE, Cedar Rapids, Chairman
- Committee on Necrology—
  LEE R. WOODWARD, Mason City, Chairman
- Committee on Newspaper Publicity—
  CLYDE A. BOICE, Washington, Chairman
- Committee on Professional Relations—
  PRINCE E. SAWYER, Sioux City, Chairman
- Public Relations Committee—
  WALTER L. BIERRING, Des Moines, Chairman

Report of Trustees
Report of Delegates to A. M. A.
Report of Standing Committees of the House of Delegates:
- Arrangements—
  WILLIAM W. BOWEN, Fort Dodge, Chairman
- Constitution and By-Laws—
  FREDERICK J. SWIFT, Maquoketa, Chairman
- Finance—
  ERNEST C. MCCLURE, Bussey, Chairman
- Medico-Legal—
  FRANK A. ELY, Des Moines, Chairman
- Publication Committee—
  RALPH R. SIMMONS, Des Moines, Editor
- Public Policy and Legislation—
  THOMAS A. BURCHAM, Des Moines, Chairman
- Scientific Work—
  WILLIAM W. BOWEN, Fort Dodge, Chairman

Report of Special Committees of the House of Delegates:
- Committee on Child Health and Protection—
  FRED MOORE, Des Moines, Chairman
- Historical—
  WALTER L. BIERRING, Des Moines, Chairman
- Medical Economics—
  JOHN I. MARKER, Davenport, Chairman
- Medical Library—
  FELIX A. HENNESSY, Calmar, Chairman
- Military Affairs—
  AARON C. CONAWAY, Marshalltown, Chairman
- Superannuated Physicians—
  WILLIAM F. AMDOR, Carbon, Acting Chairman
- Women's Auxiliary Advisory Committee—
  CLYDE A. BOICE, Washington, Chairman

Memorials and Communications
New Business
Election of Committee on Nominations

Friday, May 12

8:00 a. m.

Roll Call
Reading of Minutes
Report of Committee on Nominations
Election of Officers
Report of Committees
Unfinished Business
New Business
Adjournment

HEADQUARTERS



HOTEL FORT DES MOINES

MEETING PLACES

Headquarters—Hotel Fort Des Moines.

General Meetings—West Ballroom, Hotel Fort Des Moines.

House of Delegates—Oak Room, Hotel Fort Des Moines.

Eye, Ear, Nose and Throat Section—The Cabin, Hotel Fort Des Moines.

Registration and Commercial Exhibits—Mezzanine Floor, Hotel Fort Des Moines.

Scientific Exhibits—Green Room, Hotel Fort Des Moines.

Headquarters for Ladies—Hotel Fort Des Moines.

SPECIAL MEETINGS

County Secretaries Conference Luncheon
Wednesday, May 10
Hotel Fort Des Moines, 12:15 p. m.

Military Surgeon's Dinner
Wednesday, May 10
Oak Room—Hotel Fort Des Moines, 6:30 p. m.

Alumni Association S. U. I. College of Medicine
Thursday, May 11
Kirkwood Hotel, 12:00 noon

Eye, Ear, Nose and Throat Section
Thursday, May 11
Place to be announced, 12:00 noon

Iowa Pediatric Club
Friday, May 12
Place to be announced, 12:15 p. m.

Section Chairmen and Reporters

Section on Medicine—
Chairman, Albert A. Schultz, M.D., Fort Dodge

Section on Surgery—
Chairman, Guy T. McCauliff, M.D., Webster City

Section on Ophthalmology, Otology and Rhinolaryngology—
Chairman, Harold J. McCoy, M.D., Des Moines

Reporter, General Session—
Master Reporting Company, Chicago

Reporter, House of Delegates—
Dorothy C. McCarthy, Des Moines

OUR GUESTS

David P. Barr, M.D,. St. Louis, Missouri
Della G. Drips, M.D., Rochester, Minnesota
William C. Finnoff, M.D., Denver, Colorado
Harry M. Richter, M.D., Chicago, Illinois

Rules for Papers and Discussions

"No address or paper before the Society, except those of the President and the Guests, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes nor more than once on any subject." "All papers read before the Society shall be the property of the Society." (Excerpts from By-laws.)

Each paper shall be typewritten, and deposited with the Secretary when read; if this is not done, it will not be published.

On rising to discuss a paper, the speaker will please come forward and announce his name and address plainly.

Registration

Do not fail to register.

Please bring your membership card for presentation at registration desk.

IOWA STATE MEDICAL SOCIETY OFFICERS AND COMMITTEES 1932-1933

President.....William W. Bowen, Fort Dodge
President Elect.....Charles B. Taylor, Ottumwa
Second Vice President.....Elliott C. Cobb, Sioux City
Secretary.....Robert L. Parker, Des Moines
Treasurer.....E. B. Winnett, Des Moines

COUNCILORS

	Term Expires
First District—Felix A. Hennessy, Calmar	1937
Second District—Lee R. Woodward, Mason City (Chairman)	1933
Third District—Frank P. Winkler, Sibley	1934
Fourth District—James E. Reeder, Sioux City	1933
Fifth District—William W. Pearson, Des Moines	1936
Sixth District—Charles W. Ellyson, Waterloo	1933
Seventh District—Arthur W. Erskine, Cedar Rapids	1933
Eighth District—Clyde A. Boice, Washington (Secretary)	1934
Ninth District—Harold A. Spilman, Ottumwa	1935
Tenth District—James G. Macrae, Creston	1936
Eleventh District—M. Charles Hennessy, Council Bluffs	1937

TRUSTEES

Oliver J. Fay, Des Moines.....1934
Gordon F. Harkness, Davenport.....1933
Edward M. Myers, Boone.....1935

DELEGATES TO A. M. A.

Fred Moore, Des Moines.....1933
E. D. Plass, Iowa City.....1934
T. F. Thornton, Waterloo.....1934

ALTERNATE DELEGATES TO A. M. A.

N. G. Alcock, Iowa City.....1933
George M. Crabb, Mason City.....1934
F. J. Swift, Maquoketa.....1934

EDITOR OF THE JOURNAL

Ralph R. Simmons.....Des Moines

STANDING COMMITTEES OF THE HOUSE OF DELEGATES

Arrangements

William W. Bowen, Chairman.....Fort Dodge
Robert L. Parker.....Des Moines
E. B. Winnett.....Des Moines

Constitution and By-Laws

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John H. Peck.....Des Moines
Channing G. Smith.....Granger

Finance

Ernest C. McClure, Chairman.....Bussey
Reu L. Barnett.....Atlantic
Andrew W. Bennett.....Iowa City

Medico-Legal

Frank A. Ely, Des Moines, Chairman.....1935
George C. Albright, Iowa City.....1933
F. Earl Bellinger, Council Bluffs.....1934

Publication Committee

Ralph R. Simmons, Editor.....Des Moines
Robert L. Parker, Secretary.....Des Moines
Oliver J. Fay, Trustee.....Des Moines
Gordon F. Harkness, Trustee.....Davenport
Edward M. Myers, Trustee.....Boone

Public Policy and Legislation

Thomas A. Burcham, Chairman.....Des Moines
Frank L. Williams.....Des Moines
Peter A. Bendixen.....Davenport
William W. Bowen.....Fort Dodge
Robert L. Parker.....Des Moines

Scientific Work

William W. Bowen, Chairman.....Fort Dodge
Robert L. Parker.....Des Moines
E. B. Winnett.....Des Moines

SPECIAL COMMITTEES OF THE HOUSE OF DELEGATES

Committee on Child Health and Protection

Fred Moore, Chairman.....Des Moines
E. D. Plass.....Iowa City
J. D. Boyd.....Iowa City
Lee F. Hill.....Des Moines
H. E. Farnsworth.....Storm Lake

Historical

Walter L. Bierring, Chairman.....Des Moines
Frank M. Fuller.....Keokuk
William Jepson.....Sioux City
Arthur D. Woods.....State Center
John T. McClintock.....Iowa City

Medical Economics

John I. Marker, Chairman.....Davenport
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James C. Hill.....Newton

Medical Library

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Military Affairs

A. C. Conaway, Chairman.....Marshalltown
Harold A. Spilman.....Ottumwa
T. F. Suchomel.....Cedar Rapids

Superannuated Physicians

*William L. Hearst, Chairman.....Cedar Falls
William F. Amdor.....Carbon
W. S. Greenleaf.....Atlantic

Woman's Auxiliary Advisory Committee

Clyde A. Boice, Chairman.....Washington
Emil C. Junger.....Soldier
O. A. Kabrick.....Grandview
James M. Donelan.....Glenwood
P. B. McLaughlin.....Sioux City

* Deceased.

STANDING COMMITTEE OF THE COUNCIL

Speakers Bureau Committee

Daniel J. Glomset, Chairman.....Des Moines
Felix A. Hennessy.....Calmar
L. C. Kern.....Waverly
John C. Parsons.....Creston
Harold A. Spilman.....Ottumwa

SPECIAL COMMITTEES OF THE COUNCIL

Committee on Cancer Literature

William Jepson, Chairman.....Sioux City
William W. Bowen.....Fort Dodge
Frank M. Fuller.....Keokuk

Medical Education and Hospitals

Arthur W. Erskine, Chairman.....Cedar Rapids
*Albert V. Hennessy.....Council Bluffs
Louis F. Talley.....Marshalltown

* Deceased.

Committee on Newspaper Publicity

Clyde A. Boice, Chairman.....Washington
Edward M. Myers.....Boone
Daniel J. Glomset.....Des Moines

Professional Relations

Prince E. Sawyer, Chairman.....Sioux City
William R. Brock.....Sheldon
Sydner D. Maiden.....Council Bluffs

Public Relations

Walter L. Bierring, Chairman.....Des Moines
Raymond S. Grossman.....Marshalltown
Ezra L. Wurtzer.....Clear Lake

Dorothy C. McCarthy, Chief Clerk.
Virginia R. Stewart, Assistant to the Editor.
Dorothy M. Nelson, Secretary, Speakers Bureau.

OFFICERS OF THE WOMAN'S AUXILIARY TO THE IOWA STATE MEDICAL SOCIETY

President.....Mrs. P. B. McLaughlin, Sioux City
President Elect.....Mrs. W. A. Seidler, Jamaica
First Vice President.....Mrs. C. W. McLaughlin, Washington
Second Vice President.....Mrs. J. C. Donahue, Centerville
Third Vice President.....Mrs. J. A. Downing, Des Moines
Fourth Vice President.....Mrs. P. W. Beckman, Perry
Secretary.....Mrs. Wilbert W. Bond, Des Moines
Treasurer.....Mrs. William Jepson, Sioux City

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Legislation....Mrs. Thomas A. Burcham, Des Moines
Educational Program.....Mrs. Channing G. Smith, Granger
Revision.....Mrs. O. J. Fay, Des Moines
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Hygeia.....Mrs. G. E. Harrison, Mason City
Parliamentarian.....Mrs. Ralph Parker, Des Moines
Press and Publicity....Mrs. J. E. Kessell, Des Moines

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President.....Mrs. W. W. Syp, Centerville
Secretary.....Mrs. C. S. Hickman, Centerville
Treasurer.....Mrs. F. B. Leffert, Centerville

Cerro Gordo Auxiliary

President.....Mrs. C. M. Franchere, Mason City
Secretary.....Mrs. G. E. Harrison, Mason City
Treasurer.....Mrs. C. B. Tice, Mason City

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Secretary.....Mrs. John H. Chittum, Wapello

Mills Auxiliary

President.....Mrs. Thomas L. Lacey, Glenwood
Secretary-Treasurer..Mrs. D. W. Harman, Glenwood

Muscatine Auxiliary

President.....Mrs. T. I. Wigim, Muscatine
Secretary.....Mrs. C. P. Phillips, Muscatine
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President.....Mrs. Thomas A. Burcham, Des Moines
Secretary.....Mrs. Rodney P. Fagan, Des Moines
Treasurer.....Mrs. James E. Dyson, Des Moines

Washington Auxiliary

President.....Mrs. C. W. McLaughlin, Washington
Secretary.....Mrs. E. E. Blythe, Riverside
Treasurer.....Mrs. C. A. Boice, Washington

Webster Auxiliary

President.....Mrs. E. D. Morrison, Fort Dodge
Secretary.....Mrs. F. L. Knowles, Fort Dodge
Treasurer.....Mrs. E. M. Kersten, Fort Dodge

Woodbury Auxiliary

President.....Mrs. R. W. Perkins, Sioux City
Secretary.....Mrs. Robert Knott, Sioux City
Treasurer.....Mrs. H. M. McCuistion, Sioux City

Woman's Auxiliary Iowa State Medical Society

Organized May 9, 1929, Des Moines, Iowa

Fourth Annual Meeting
Registration Headquarters
Hotel Fort Des Moines

PROGRAM

Wednesday, May 10

11:00 a. m.
Pre-convention Meeting (For Board Members)

12:30 p. m.
Luncheon—(For Board Members)

2:30 p. m.
General Meeting
Hotel Fort Des Moines

President Mrs. P. B. McLaughlin, Presiding

Invocation—
REVEREND JAMES T. MORDY, Des Moines

Music—

Greetings of Welcome—
MRS. OLIVER J. FAY, Des Moines

Response—
MRS. R. W. PERKINS, President, Woodbury County Auxiliary

Business Meeting

Address—
GORDON F. HARKNESS, M.D., Davenport

8:00 p. m.
Card Party
Hotel Fort Des Moines

Thursday, May 11

10:00 a. m.
Business Meeting, Woman's Auxiliary

Greetings—
CLYDE A. BOICE, M.D., Chairman, Advisory Board, Woman's Auxiliary, Iowa State Medical Society

Greetings—
W. W. BOWEN, M.D., Fort Dodge, President, Iowa State Medical Society

Election of Officers

Installation of Officers

Post-Convention Meeting held upon adjournment of this meeting.

1:00 p. m.
Luncheon, Wakonda Country Club
Music

6:00 p. m.
Banquet, Hotel Fort Des Moines
Physicians, wives and guests

This program, social and business, is for all visiting women. All eligible women are urged to become members.

State Society of Iowa Medical Women

Thirty-sixth Annual Meeting, Des Moines

Wednesday, May 10, 1933

Headquarters—Hotel Kirkwood

Dinner
6:00 p. m.

Greetings—
ELEANOR M. HUTCHINSON, M.D., Woodward, Vice President

Adventures Abroad—
ZELLA WHITE STEWART, M.D., Iowa City

Evening Program
7:00 p. m.

Announcement of Committees—

President's Address—
EMMA ACKERMAN, M.D., Sioux City

Functional Disturbances of the Menopause—
DELLA G. DRIPS, M.D., Rochester, Minnesota

The Practice of Gynecology in China—
RUTH F. WOLCOTT, M.D., Spirit Lake

Annual Business Meeting—

OFFICERS

President.....Emma Ackerman, M.D., Sioux City

Vice President.....
.....Eleanor M. Hutchinson, M.D., Woodward

Secretary.....Julia Ford Hill, M.D., Des Moines

Treasurer.....
....Jeannette Dean-Throckmorton, M.D., Des Moines

Des Moines--The Convention City



DES MOINES WATERFRONT

Des Moines, situated as it is, in almost the exact center of the state, makes an exceptionally good "convention city" for the state of Iowa. It is equally accessible from all sections of the state and every member of the Iowa State Medical Society is within a few hours of Des Moines, either by road or rail. Nineteen railroad lines pass through Des Moines, and paved roads, which form an extensive network throughout the state, all lead to the convention city.

The first meeting of the State Medical Society ever to be held in Des Moines was in 1868—just sixty-five years ago. At that time the southeastern part of the state was the center of medical activities and although the society was organized in 1850, its Eighteenth Annual Session was the first one to be held in Des Moines. There were forty members present, with the following towns represented:

Adel	1	Hartford	1
Blakesburg	1	Iowa City	4
Burlington	2	Keokuk	5
Chariton	2	Ottumwa	2
Davenport	2	Panora	1
Des Moines	7	Tama City	1
Dubuque	1	Unionville	1
Durand Station	1	Winterset	3
Fort Madison	2	Miscellaneous	2

The advantages of the central location of Des Moines have become so evident that now the annual session is held here every other year. It is interesting to compare the attendance of the last meeting in Des Moines with that of the first meeting. The figures below show the attendance by counties at the meeting in Des Moines in 1931:

Adair	2	Johnson	24
Adams	2	Jones	1
Allamakee	0	Keokuk	5
Appanoose	5	Kossuth	1
Audubon	4	Lee	5
Benton	3	Linn	18
Black Hawk	21	Louisa	2
Boone	17	Lucas	8
Bremer	4	Lyon	0
Buchanan	4	Madison	9
Buena Vista	1	Mahaska	15
Butler	3	Marion	9
Calhoun	5	Marshall	18
Carroll	11	Mills	1
Cass	11	Mitchell	1
Cedar	3	Monona	1
Cerro Gordo	9	Monroe	3
Cherokee	2	Montgomery	2
Chickasaw	3	Muscatine	9
Clarke	7	O'Brien	1
Clay	0	Osceola	2
Clayton	2	Page	6
Clinton	5	Palo Alto	2
Crawford	3	Plymouth	2
Dallas-Guthrie	29	Pocahontas	5
Davis	7	Polk	172
Decatur	8	Pottawattamie	13
Delaware	3	Poweshiek	16
Des Moines	10	Ringgold	3
Dickinson	3	Sac	0
Dubuque	7	Scott	14
Emmet	3	Shelby	3
Fayette	8	Sioux	1
Floyd	0	Story	25
Franklin	3	Tama	4
Fremont	0	Taylor	5
Greene	4	Union	9
Grundy	5	Van Buren	1
Hamilton	4	Wapello	22
Hancock-Winnebago	1	Warren	10
Hardin	12	Washington	7
Harrison	1	Wayne	7
Henry	7	Webster	17
Howard	1	Winneshiek	2
Humboldt	0	Woodbury	25
Ida	3	Worth	2
Iowa	7	Wright	7
Jackson	3		
Jasper	12		
Jefferson	7		

This made a total of 790 members registered, and all but 7 counties represented. The annual session has expanded in other ways than in attendance since that first meeting in Des Moines. Whereas that meeting was only a one day meeting, and limited to a business session, the present annual meeting extends over a period of three days, with a scientific program, business sessions, committee meetings, commercial and scientific exhibits, woman's medical society program, and a joint meeting of the woman's auxiliary. A registration desk with a staff of three is required to take care of the registration.

With the interest and activity of the profession increasing each year, it is expected that the attendance at the meeting in Des Moines this year will exceed even that of 1931, which was the largest registration ever recorded. A great deal of time and thought has gone into the plans for both the scientific program and the entertainment of the doctors and their wives, and it is anticipated that more than one-third of the membership of the state society will take advantage of the opportunity of attending the annual session.

There are many features of interest in Des Moines to be visited when the scientific or business meetings are not in session. One outstanding feature, which has been opened since the last visit of the annual session in Des Moines, is the Smouse Opportunity School. Visitors have come from great distances to see this unusual school, the gift of a doctor and his wife, who are interested in the welfare of handicapped children. Every physician will want to see how this school meets the physical and mental needs of the handicapped child.

Des Moines is well equipped to handle large crowds and all the hotels are centrally located. The Fort Des Moines Hotel is the "home" of the annual session. The general meetings are held in the ballroom, the commercial exhibits are on the mezzanine floor and in the smaller ballroom, the scientific exhibits are in the Green Room, the House of Delegates meets in the Oak Room, the Woman's Auxiliary headquarters are here, and the various committee meetings will be held in the smaller rooms in the hotel. The registration desk and information bureau will be located on the mezzanine floor.

For those who wish to make reservations in advance, the following list of hotels is submitted:

The Fort Des Moines (Headquarters Hotel), Tenth and Walnut Streets, 400 rooms, each with bath. Single, $2.50 up; Double, $3.50 up.

The Brown, Fourth and Keosauqua Way, 250 rooms. Single with bath, $2.00 up.

The Chamberlain, Seventh and Locust, 225 rooms. Single, with bath, $1.50 up.

The Commodore, 3440 Grand Avenue. Furnished apartments. Complete hotel service. Cafe and garage. Single, $2.50 up; Double, $3.50 up.



SMOUSE OPPORTUNITY SCHOOL

The New Kirkwood, Fourth and Walnut, 300 rooms each with bath. Single, $2.00 and $2.50. Double, $3.00 and $3.50.

The Savery, Fourth and Locust Streets, 350 rooms, each with bath. Single, $2.00 up. Double, $3.00 up.

To the wide-awake member of the Iowa State Medical Society this annual session offers an unusual opportunity for scientific knowledge, information about the business affairs of the state society, carefully planned entertainment and the most cordial relations with his colleagues in medicine. To the new physician it affords an excellent chance for orientation and becoming acquainted with the active and outstanding men in the profession throughout the state. Every member of the society will profit by his attendance; and the state society will gain in the renewed and increased interest in scientific and society affairs which such attendance will evoke in each member.

Make the 1933 annual session the best yet!

HYPERTENSION*

Mark C. Wheelock, M.D., Sioux City

Heart disease unquestionably remains one of the foremost causes of increased mortality and morbidity rates, and of the numerous cardiopathies, hypertension is exceedingly high in the list. At the present we do not definitely know the causes of high blood pressure although we have marshalled a few pertinent facts. There is undoubtedly an hereditary factor, on the basis of a tendency to changes in the vascular structures, of a physical type definitely pointing to obesity or of the inheritance of emotional instability. Intoxications of endogenous and exogenous origin are commonly accepted progenitors. In the first class are grouped fatigue with its end products, incomplete protein cleavage, endocrine dysfunctions, (usually a hypocalcemia), ovarian changes at the menopause, overfunctioning of the adrenal or thyroid glands, pregnancy and nephritis and finally anemia. In the second class we find poisoning from metals such as mercury, arsenic, lead and copper; and indiscretions in the use of alcohol, tobacco and food. A third class includes infections, usually focal, as of the teeth and the tonsils, less commonly of the cervix, and other pelvic structures and the gallbladder, the generalized infections, such as influenza, typhoid and rarely lues. Vaquez and his school are of the opinion that there is previously a hypersecretion of the adrenal gland which causes a spasm of the peripheral vessels. If this remains constant over a definite period of time, there is a compensatory increase of vascular tension which places added strain on the arteries. In order to compensate there is a gradual deposition of calcium salts in the intima and the media. This increases the pressure and hence the vicious cycle is completed. Since sclerosis of the vessels is seen so commonly in diabetes mellitus and since lipoids form a great part of atheroma, some observers feel that fat metabolism is associated with hypertension. It is a well known fact that angiosclerosis is an important predecessor of hypertension. Suffice it to say that there is at the present not one known definite cause, but only a series of possible factors.

Forty-two cases of hypertension were analyzed, of which eighteen were in men and twenty-four in women. This ratio is at variance with the textbooks in which it is stated that men are afflicted almost three to four times as often as women. With three exceptions all of the women patients were housewives; of the others, one was a bank clerk, one a nurse and one a cosmetologist. The ordinary housewife has as a composite background the accepted eitologic factors, such as worry, work, overeating, the diseases of childhood and later life, the emotional and physical strain of several pregnancies followed by the imbalance of the climacteric. Parturition is a physiologic process but subjects the female organism to excessive hardships. Of the men, ten led sedentary lives and eight were very active.

Previous sickness played only a minor rôle: gallbladder infection had ocurred in five cases, pneumonia in five, typhoid in four, repeated attacks of tonsillitis in five and diphtheria, yellow jaundice and malaria, each in one. Scarlet fever was seen in three and in one caused an acute nephritis, which resulted in hypertension. It is interesting to note the absence of excessive use of tobacco and alcohol, and of fibromata.

As might have been expected there was approximately an even distribution in ages between the groups, ranging from fifty-one to sixty in the first and sixty-one to seventy in the second, with thirteen in the former and twelve in the latter. However, there were two patients between eleven and twenty years and three between twenty-one and thirty. Of the first two, the hypertension in one was due to an attack of acute nephritis, the other was, I believe, an example of the so-called "hypertension de luxe" characterized by anxiety, fatigue, too heavy, rapid and faulty eating with a rapid fall in pressure under the influence of bed rest and strict diet. In the three between twenty-one and thirty, hypertension in two was definitely proved as resulting from hyperthyroidism while the other was believed to be a true case of essential hypertension. One case, in a patient between thirty-one and forty years of age, was caused by thyrotoxicosis. Of the five between forty-one and fifty, four had essential hypertension and one had arteriosclerosis. In the majority of the class from fifty-one to sixty, the condition was the result of arteriosclerosis rather than either essential or nephritic hypertension. It is well to know at this time that the systolic pressure in the patient with acute nephritis was on three occasions over 150 and the diastolic over 90. The case diagnosed as of the "de luxe" type was that of a young girl, seventeen years of age, who had come from a small town and was leading anything but a routine life. Her highest systolic reading was 148 and the diastolic 90. However, on three recordings the systolic pressure was above 140, which would certainly be a high normal. She improved under care but has left the city so that a further check is impossible. Of the others, all had constant systolic readings over 150 and, with the exception of those suffering from Grave's disease, diastolic pressures over 90.

* Presented before the Woodbury County Medical Society, November 15, 1932.

Eighteen were overweight, fifteen normal and nine below normal weight. Naturally in the latter class were those with Basedow's disease. We have all been told of the apoplectiform habitus, the short, fat, thick-necked, rotund type with the prominent vessels and venules, who are excessive indulgers. Certainly obesity resulting from excessive intake is a direct causative factor.

There was an hereditary basis in eleven cases, one of which is worthy of note. The patient had an arteriosclerotic type of increased pressure; his father died at eighty of high blood pressure and a stroke; his mother died of hardening of the arteries and high blood pressure at a late age; one sister has had a known increased tension for thirty years: one sister died suddenly; one brother has high blood pressure and another a slight increase. Up to the present time only one brother is definitely free. Vaquez describes one man who had a long line of ancestors all of whom had suffered and died from hypertension or one of its complications. He lived to see each one of his brothers and sisters develop the condition; but even though he chose a very strict regimen, with a protein free diet and much rest, he died the same death as had his forbears.

The symptoms and their frequency were as follows:

Dyspnea	18	Amnesia	6
Nocturia	16	Emotional upset	6
Sleeplessness	14	Stomach trouble	5
Nervousness	14	Tinnitus	5
Palpitation	14	Tachycardia	4
Vertigo	13	Aphonia	4
Headache	11	Sore mouth	4
Paresthesia	11	Ataxia	4
Swollen ankles	9	Epistaxis	4
Fatigue	9	Coma	3
Eye trouble	8	Sore tongue	2
Weight loss	8	Constipation	2
Cough	8	Anorexia	2
Nausea or vomiting or both	7	Fainting	1
		Swollen face	1
Hemiplegia	6	Angina	1

This represents nearly all of the symptoms that can be attributed to increased pressure. Undoubtedly many of them, especially those represented only a few times, were due to complications or accompanying pathologic conditions. Nosebleed was seen less frequently than might be expected. There was usually a striking inconstancy of symptoms. In some cases one could elicit only a negligible history. Three patients suspected the presence of increased pressure although they had no definite reasons. In no instance was there vaginal bleeding. There is a pathologic condition known as fibrosis uteri in which the outstanding complaint is bleeding. I recall three cases in which a hysterectomy was done. The tissue was difficult to section, operative bleeding was profuse, ligatures would not hold and the calcified vessels stood out prominently. All three of these women had increased systolic and diastolic pressures with evidences of arteriosclerosis. All had passed the menopause. One woman whose pressure was 288/180 mentioned only one symptom, that of insomnia.

The physical findings were as follows:

Increased systolic pressure	37
Increased diastolic pressure	35
Hypertrophy and dilatation	35
Accentuated aortic second sound	33
Thickened vessels	21
Accentuated first sound at the apex	19
Changes in the fundi	17
Irregular pulse	16
Visible pulsations:	
In the neck	16
In the arms	4
In the suprasternal	5
Bad teeth	14
Arcus senilis	12
Positive fluoroscopy	10
Rales	10
Decompensation	9
Murmurs	9
Chest	9
Infected tonsils	9
Tremor	6
Varicose veins	5
Paralysis	4
Sore mouth	4
Sore tongue	3
Cyanosis	3
Palpable liver	3
Edema	2

It is well to remember that repeated blood pressure readings of both systolic and diastolic pressures are necessary to find every case of hypertension, just as it is essential to let your patients rest for a time before deciding the ultimate pressure. A heart failing from any cause including increased tension will often read normal or low. If there is relative insufficiency of the aortic valve due to dilatation there will be a low systolic pressure although a sustained diastolic pressure is usually present. If we rule out causative valvular insufficiency and adherent pericarditis, any enlarged heart usually presupposes an increased resistance. In the normal chest this enlargement is apparent upon percussion and palpation. If this enlargement is found to be barrel shaped, we should make use of the x-ray or the fluoroscope. A booming aortic second sound is almost pathognomonic.

Thickened arteries usually point to generalized arteriosclerosis with its resultant increased pressure. If the examination of the fundi is made a routine matter, one will soon be able to note the more outstanding changes which are caused by retinal sclerosis or deposits in kidney disease. Much attention has recently been directed to pulsating vessels, which are usually found in the suprasternal notch or the right carotid artery, and are due to a sclerosis of the aorta and the innominate artery. Palpation will often enable one to make out the aorta in the notch. Pulsation of the brachial vessels may often be noted. I have often wondered about the relationship of arcus senilis and hypertension resulting from arteriosclerosis. It was seen too often to ignore, but there is no mention of this possible relationship in the available literature. On one or two occasions I have examined a person, noted the arcus senilis, and diagnosed a hypertension which was later confirmed.

The associated conditions were as follows: Cholecystitis, four; cerebral accidents, three; pyelitis, two; malnutrition, two; diabetes, two; pernicious anemia, hernia, pleurisy, pyloric cancer and multiple sclerosis, one each. Attention is called to the absence of lues. We are now told that there is enlargement of the heart only if lues is the precursor of an aortic insufficiency and there is no increase in the pressure.

The nonprotein nitrogen was elevated in fourteen cases, the urea in nine, the blood sugar in eight, and the creatinine in three. The erythrocyte count was decreased in fourteen, the hemoglobin in thirteen, and the white count elevated in twenty. The specific gravity of the urine was fixed in nine, there were granular casts in twelve, hyaline in thirteen, red blood corpuscles in fourteen, and white blood cells in twenty-two, with sugar in three. There was four plus albumin in six, two plus in two, and one plus in eight. The nitrogenous products increase in the blood stream only when elimination through the kidney is impaired, providing we rule out transitory nitrogen retention as represented by an excessive rate of protein catabolism or prerenal deviation of water. We also find at this time casts and albumin in the urine, red blood corpuscles with a fixed specific gravity, increased night specimens, and nycturia. There may be a slight trace of albumin, and a few casts in essential hypertension, but these signs are usually absent. Urinary retention associated with hypertension is usually due to arteriosclerosis. This condition produces either a sclerotic kidney or a chronic interstitial nephritis with an increasing blood pressure. A passive congestive kidney resulting from decompensation following hypertension or any other cause, will show albumin, casts, erythrocytes and diminished urine. However, the urine becomes less clouded as the congestion diminishes. A secondary anemia will often accompany nephritic changes.

One of our most useful and simple tests has been little used. I speak of the Mosenthal test with its evening restriction of fluids, its analysis of two-hour specimens, and a final twelve-hour examination of the urine. Attention is directed to the fixed specific gravity and the increase of nycturia over 450 c.c. as being true evidence of kidney damage. Volhard has a more simple test; one of three hourly specimens in the morning following the same restrictions. The normal specific gravity should be from 1.026 to 1.034, or an average of 1.030. A specific gravity under 1.020 points to impaired renal function and if it is under 1.010, severe kidney damage should be suspected. These findings in conjunction with those of the dye test and the blood chemistry, should determine the absence or presence of kidney damage. These specific gravity tests are of no value if we are trying to eliminate the possibility of edema since it is difficult to differentiate between the arteriosclerotic kidney and chronic nephritis.

Some cases are not easily diagnosed and the following classification of symptoms may prove helpful:

I. Acute
   1. Lead poisoning
   2. Eclampsia
   3. Gastric crises of tabes
   4. De luxe or functional hypertension
   5. Hyperthyroidism

II. Chronic
   1. Arteriosclerosis
      a. Cerebral
      b. Cardiac
      c. Renal
      d. Combined
   2. Nephritis
   3. Essential hypertension
      a. Benign
      b. Malignant

The above outline has been made on a basis of etiology. We are all familiar with the functional or de luxe type of hypertension. It is well to bear in mind that these people are usually rejected by life insurance companies. On the other hand some patients showing hypertrophy and dilatation, with a booming aortic second sound and a low pressure, are accepted. Diagnosis of the essential type necessitates considerable observation. A labile type of pressure in which the systolic pressure rise is accompanied by diastolic pressure which may be greatly elevated on one day, and

forty or fifty points lower on the next, with some hypertrophy and dilatation, and with few findings in the urine, will often be sufficient. There is usually a normal blood chemistry. The arteriosclerotic type shows a marked increase in tension, thickened vessels, visible pulsations with an arcus senilis, and marked head symptoms with suggestions of previous cerebral accidents. The renal type shows the usual low specific gravity, increased albumin, casts of all varieties, with increased nitrogen retention, and diminished dye filtration. Hypertension of this nature is very similar to the nephritic type of hypertension except that in the latter, one usually has some secondary anemia, a pasty color and changes in the retina. The cardiac arteriosclerotic patient will give a history of anginal attacks or previous myocardial decompensation. The hyperthyroid type shows an increased systolic pressure and normal diastolic pressure, with an increased pulse pressure, high basal metabolic rate, rapid pulse and no cardiac enlargement. The eclamptic type and that resulting from poisoning are, as a rule, easily distinguished.

There were no cases of the eclamptic type in this series and none resulting from poisoning or lues.

There was one of the de luxe or functional type and five of the hyperthyroid group; also one case of nephritic hypertension.

Of the arteriosclerotic series, eight could be traced to cerebral accidents; three to cardiac insufficiency; two to renal damage; and six had combined symptoms. There were six in the nephritic group, of which one had symptoms of Grave's disease. Two malignant and nine benign cases were noted in the essential hypertension classification.

The prognosis of the de luxe, the hyperthyroid and of the benign essential groups is fair; that of the nephritic, the renal arteriosclerotic and the malignant essential, most unfavorable. Barring serious accidents the cerebral arteriosclerotic patients may live for years although senile changes and mental deterioration are likely to occur. Hypertensive hearts are prone to failure. Cabot states that infection, intoxication and operative insult are more often followed by death when the heart already shows hypertrophy and dilatation. Cardiac failure occurs in 60 per cent, cerebral accident in 25 per cent and renal insufficiency with uremia in 10 per cent. It is well to bear in mind that cardiac failure is as common with hypertension as any other cardiopathy.

The treatment of hypertension depends upon the etiologic factor. The functional type responds quickly to the establishment of a routine with much rest and free diet. If early the hyperthyroid variety will fall within several months after surgery. The arteriosclerotic variety does best on potassium iodide. If cerebral symptoms are demonstrable, venesection is indicated. The sulphocyanates are employed in the treatment of essential hypertension although their use is contra-indicated in the presence of anginal pain or hematuria. Two new preparations have recently been introduced; the first, known as acetyl choline, is marketed by the Anglo-France Drug Corporation. The disadvantage of this preparation is the price and the fact that it must be administered intramuscularly. Its action is evidently vasodilator in type, because the skin temperature and perspiration are increased. In the few cases in which I have seen it used there was no marked benefit. Sharp and Dohme have on the market a product known as Desympatone or tissue extract number 568, supposedly derived from the pancreas. The active principle is said to be antagonistic to adrenalin. I recently had the opportunity of trying it on a case of essential hypertension of the benign type. It is given intramuscularly, one cubic centimeter at a dose. As far as could be noted there was no dramatic result.

In the final analysis, diet and periodic rest still offer our most satisfactory therapy. Some of our obese individuals on a limited diet lost weight proportionately with the lessened blood pressure. Rigid catharsis, such as the salines, seems unnecessary since I feel that dehydration is better accomplished by venesection. Protein may be had and should be used. It is better not to alarm the patient and to judge his condition by his general well being. He may use the ordinary amount of salt, tobacco, tea and coffee. Mild sedatives, such as barbital and phenobarbital, will aid. "The simple rule of moderation in all things gives better results than rigid abstinence," as stated by Binswanger and Strouse, is an excellent rule to follow.

THE MANAGEMENT OF SOME OF THE MORE COMMON BLADDER INFECTIONS*

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I have chosen to discuss this topic for several reasons; first, because of the common occurrence of bladder infections; second, because of its importance in the diagnosis of related lesions in the urinary tract; and third, because it is continually confronting all members of the profession regardless of the specialty in which they are engaged.

Due to the relative infrequency with which we find simple cystitis existing as a pathologic

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entity, we prefer using the term to denote a symptom complex consisting of frequent, painful urination and pyuria. There is a common tendency among us to regard these symptoms as pathognomonic of bladder inflammation—no more, no less.

We conduct a detailed and careful examination of the patient who complains of abdominal pain, and yet dismiss with a wave of the hand and some urinary antiseptic, a patient who presents symptoms of bladder infection. Having concluded that the patient has cystitis, we are relieved of the responsibility of further diagnosis. It is true that many times our patient may have only a simple cystitis, with involvement of the bladder mucosa to a greater or a lesser degree, yet he may also have a bladder calculus, tuberculous cystitis, pyelitis, new growth, or a number of conditions which call for further investigation, if our treatment is to be successful.

A correct diagnosis may be quickly and surely made, first by a careful history and physical examination; second by examination of the urine, best obtained by catheterization; and lastly by examination with the cystoscope. An examination of the bladder with the cystoscope yields a wealth of information. The technic is relatively simple, particularly in the female, and the examination may be done in the office without anesthesia, with the exception perhaps of a little cocaine, (2 per cent applied to the urethra). It is surprising how little discomfort is caused.

In the male, however, cystoscopy is more difficult, and we prefer to use caudal block anesthesia preceded by morphine, 1/6 grain, or some of the hypnotics. Cystoscopic examinations of the male are not done in the office. Cystograms, ureterograms, or pyelograms are resorted to when indicated.

Bladder infections of the acute type may involve first, the bladder mucosa, and second, the submucosa. They may be of the ulcerative, hemorrhagic or catarrhal variety, and the invading organism is usually one of four types; streptococcus, staphylococcus, pneumococcus or colon bacillus. The infection may occasionally be of the gonococcus variety, secondary of course to a urethritis, and then usually in company with some of the other members of the coccus group. The infection may gain entrance to the bladder by a number of different routes:

1. The ascending route, following instrumentation or catheterization.

2. Descending infection from a pyelitis.

3. Blood-borne infection from active foci in the teeth or tonsils, possibly precipitated by trauma to the bladder, as frequently occurs in childbirth.

4. Regional causes, such as extension from a pyosalpinx or possibly a septic uterus.

Predisposing causes play an important rôle in the causation of bladder infections, for it is a well known fact that living organisms introduced into the normal bladder do not cause pathology unless accompanied by trauma or augmented by altered urine, as occurs in the male suffering from prostatic hypertrophy and urinary retention. In addition to the changes which may occur in the acidity or alkalinity of the urine, other common causes predisposing to bladder infection are: overwork, fatigue, alcoholism, exposure, and acute infections, such as grippe or influenza.

SYMPTOMATOLOGY AND PATHOLOGY

The symptoms of acute bladder infection are quite familiar; suprapubic discomfort; a feeling of weight and fullness and general malaise; fever, rarely over 102°; tenderness; dysuria; pyuria; urgency or strangury. The bladder wall at this stage is reddened; the spaces between the capillaries are obliterated, causing it to resemble red velvet in appearance. Minute hemorrhages may be present as well as mucous debris, shreds of mucous membrane and ulcerative areas. The urine is either highly acid or alkaline in nature. It is cloudy with mucus and debris, epithelium and blood cells. Leukocytes usually appear later.

TREATMENT

In treating the acute bladder infections, as in other acute diseases, we prefer to have our patient in bed. We apply an ice bag to the suprapubic region and order a bland diet particularly free from condiments. Fluids are pushed to the extent of comfort, at least six glasses of water daily. At this stage we believe a balsamic, combined with codeine or morphine, to be the most soothing type of treatment, and accordingly we give either balsam copabia, 5 minims (5 gtt.), four times a day, or sandalwood oil, 5 minims (5 gtt.), four times a day, and codeine, 1/4 grain, every four hours, or morphine, 1/4 grain, p.r.n. The urine should be alkalinized by sodium bicarbonate or citrocarbonate. Daily enemas are given, and no instrumentation is attempted during the first week. By the end of the first week our patient is usually more comfortable, and at this time irrigations of the bladder with boric acid solution are begun, followed by the instillation of two ounces of a mixture of olive oil and oil of cajeput: sixteen ounces of olive oil and four ounces of oil of cajeput. The oil is sterilized before using, and the oil of cajeput seems to act as a soothing anodyne, much as oil of cloves acts upon an aching tooth.

During the second week we make a rectal examination, or if the patient is a female we examine bimanually, and follow with a cystoscopic examination. A catheterized specimen of urine is obtained and cultured and our choice of a urinary antiseptic will depend upon the type of organism found. If the infection is due to the colon bacillus, we use hexamine, which we consider almost specific, giving 7½ grains with 5 grains acid sodium phosphate, every four hours, day and night, until the urine is positive for formaldehyde. It must be remembered, however, that hexamine is quite irritating to some bladders, and we therefore change to some other treatment at the slightest hint of bladder irritation. Alkali is best administered as soda bicarbonate, one ounce three to four times a day in water. If any of the cocci are found by culture, particularly the gonococcus, we feel that any one of the azo dyes such as pyridium, serenum, acuiflovine, are more specific. Hexylresorcinol has also proved of value as a urinary antiseptic, both locally and internally.

During the third and fourth week, we of course continue our urinary antisepsis, but instead of following our boric irrigation with oil mixture, we instill two ounces of 5 per cent neosilvol. During the fifth and sixth week we increase the neosilvol to 7½ per cent and later to 10 per cent. The bladder is usually entirely normal by the end of seven to ten weeks; occasionally in less time than that. Progress should be checked from time to time by both clinical and laboratory observations and cystoscopic examination. For our last irrigation we are in the habit of using a solution of zinc sulphate, 1 per cent as an astringent stimulating wash.

Chronic cystitis or chronic infections of the bladder with quiescent periods alternating with acute exacerbation are common; an attack of tonsillitis, grippe, or influenza being sufficient to precipitate an acute flare-up of these bladders. In these chronic varieties, especially in those existent for some time, the musculature of the bladder becomes involved, causing contraction of the walls with consequent lessened capacity. The hypertrophied muscularis shining through the mucous coat appears in the cystoscope as a trabeculation. The trigone, too, is involved, appearing angry red, and is the chief cause of the frequent urinations of which these sufferers complain. This type of cystitis is most commonly caused by the colon bacillus, and occasionally one finds B. typhosus present. In this type of case, our first step in treatment is to look for the focus. There is always a cause, usually a pyelitis, infected tonsils, cervix, teeth, or a sluggish colon. Frequently we are obliged to clean up the colon and lessen its flora by the use of colonic irrigation or acidophilus culture. Any chronic constipation should be corrected by appropriate means. A urinary antiseptic is given constantly, and here again we believe that hexamine is by far the best, unless of course, our invading organism belongs to the coccus family.

In using hexamine it is essential that we give enough to obtain free formaldehyde in the urine, the presence of which can easily be determined by the following test: To a few c.c.'s of urine, add 5 m. of ½ per cent sodium phenol hydrogen hydrochloride; 5 m. of ½ per cent sodium nitroperoxide; and an excess of sodium hydrate. A bluish green color is positive for formaldehyde. The formaldehyde test is an invaluable aid in determining our hexamine dosage.

In persistent ammoniacal cystitis we give helmitol (Merck), 7½ grains every four hours. It is actively antiseptic in alkaline urine. Irrigation of the bladder is carried out two to three times a week, usually using potassium permanganate, beginning with a 1/8000 solution and gradually increasing the strength of the permanganate to 1/2000. As the bladder neck and trigone are the common areas affected, in the female we routinely apply, by means of a Kelly endoscope and cotton applicator, a solution of silver nitrate beginning with 2 per cent and increasing to 6 per cent. Frequently we instill neosilvol, one to two ounces, but as a general rule, an irrigation with permanganate alternating with an application of silver nitrate to the bladder neck, is sufficient.

In cases with markedly lessened capacity, overdistention of the bladder, or bladder gymnastics helps to restore normal capacity. We should probably mention in passing one of the less frequent types of bladder infection, that is, cystitis cystica. In this type there is cystic edema, making the bladder appear as though it were studded with tapioca-like cysts. In these cases we have used a solution composed of 1 per cent phenol in glycerine. Two ounces of this solution are injected every day or every other day, for several applications. Usually the hygroscopic action of the glycerine combined with the caustic action of the phenol destroys the cysts. Occasionally, however, it may be necessary to resort to coagulation with diathermy.

Follow-up treatment consists of the application of zinc sulphate, beginning with 1 per cent three times a week and increasing to 3 per cent three times a week. This type of treatment has been most satisfactory. Recently, the ketogenic diet has been reported to be of distinct value as a means of keeping the urine acid, and thus ren-

dering it antiseptic. Because of obvious difficulties in maintaining a condition of ketosis in the average patient, we have found it easier and less confusing to administer acid sodium phosphate. Undoubtedly, as Dr. Helmholz has pointed out in a recent paper*, bactericidal powers in urine produced by the ketogenic diet are probably due to the synergistic action of substances yet unknown. This type of therapy in selected cases is of definite value.

CONCLUSIONS

1. Bladder infections are frequent causes of ill health. They are often secondary to foci in the urinary tract, particularly the chronic resisting variety.

2. Diagnosis by means of the cystoscope with culture of the urine enables one to rule out foci in the urinary tract, and is a distinct aid in management.

3. The types of treatment we have found to be most effective are outlined.

* Helmholz, Henry F.: The ketogenic diet in the treatment of urinary infections of childhood. Jour. Am. Med. Assn., xcix, 1305, (October) 1932.

ABSCESS OF THE PTERYGOMAXILLARY FOSSA COMPLICATING OTITIC INFECTIONS*†

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There seems to be a scarcity of references in the literature on abscesses of the pterygomaxillary or infratemporal fossa. Therefore, I wish in this paper to review the literature, and report a case.

The pterygomaxillary, infratemporal or zygomatic fossa is the space bounded laterally by the ramus of the mandible, medially by the lateral wall of the pharynx and pterygoid process of the sphenoid bone, anteriorly by the zygomatic surface of the superior maxilla, and superiorly by the lower surface of the greater wing of the sphenoid and the adjacent temporal bone. The posterior limit of the space is represented by a plane passing directly medialward from the posterior border of the ramus of the mandible to the pharynx.

The contents are the internal and external pterygoid muscles, the internal maxillary artery with its branches and companion veins, the pterygoid plexus of veins, the inferior maxillary nerve and its branches, the chorda tympani nerve, a part of the parotid gland, internal maxillary lymph glands, and the internal lateral ligament of the mandible. This description is the one given in Deaver's Surgical Anatomy; most other works on anatomy describing it as the zygomatic fossa.

In 1908 Foster[1] reported a case of abscess in the zygomatic fossa in a woman, fifty-five years of age, who had retired the evening before, apparently well and awoke in the morning with pain in the left cheek and eye, with some swelling of the side of the face, and congestion of the eyeball. The gum around a carious tooth was incised, but no pus was found. Owing to the patient's inability to open her mouth, the physician in charge of the case stated that he was unable to make the incision far enough back in the mouth. This in itself should have been a valuable clue to the diagnosis. After a few days a profuse flow of pus appeared from the incision, but the swelling of the face and exophthalmos became more pronounced in spite of the discharge. Twenty-six days after the onset, the exophthalmos and swelling of the side of the face were intense, and an incision was made through the conjunctiva in the lower fornix. No pus was discovered that day, but the next day there was a free discharge from the wound. No diminution of the exophthalmos took place, and exploration of the orbit and antrum was made without discovering pus. The wound continued to drain for some time with loss of vision of the left eye. Under ether an incision was made along the lower lid and the periosteum was elevated until an opening recognized as the sphenomaxillary fissure was brought into view. The bone was in a healthy condition, but when a probe was passed through the fissure into the cavity beyond, granulations could be felt. On removing these granulations a cavity pyramidal in shape was found. This was identified as the zygomatic fossa. The condition was promptly relieved after this operation.

The diagnostic points given by Foster in this case are the sudden onset of pain, tenderness and swelling over the side of the face, congestion of the conjunctiva, immobility of the jaw, and exophthalmos, caused probably by a direct extension of the inflammation to cause a retrobulbar cellulitis by passage of the pus through the sphenomaxillary fissure.

Foster believed that the only way by which this abscess could have been produced was metastasis through the lymph channels from some carious teeth in the upper jaw. In this case there was no ear infection.

Beck[2] stated that he had observed one unusual case of extradural abscess in the temporosphenoidal region, in which necrosis of the thin squamous portion of the temporal bone took place, with subsequent burrowing of the pus under the temporal muscle and zygoma.

Strauss[3] in his report of a case complicating an otitic infection, stated that in a search through

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†Published in Archives of Otolaryngology, December, 1932, by permission.

the literature he was unable to find record of the involvement of the pterygomaxillary fossa in connection with otitis media or suppurative mastoiditis, and indeed, mention of the locality from a practical or clinical standpoint was extremely rare. His case was one of a boy, eight years of age, who developed an otitis media requiring paracentesis within the first twenty-four hours. The discharge gradually decreased until the second week, when it became more profuse, and was accompanied by a rise in temperature and tenderness over the mastoid. The patient complained of a decided pain over the left side of the face which was exaggerated by deglutition, the pain increasing day by day until it became so intense that the patient screamed with agony when swallowing. Strauss stated that there was no swelling in the temporal or preauricular regions. There was a decided limitation of movement of the mandible, the mouth admitting the tip of a finger only. The tenderness over the mastoid increased; the discharge from the ear increased, and there was a sagging of the posterior superior wall of the canal. A diagnosis of surgical mastoiditis was made and operation advised. Dr. George Shambaugh concurred in this diagnosis the following day. X-ray showed a pneumatic mastoid which was definitely cloudy. The osseous trabeculae were apparently not broken down. The leukocyte count was 13,400 and the blood culture negative. A culture of the aural discharge showed a hemolytic streptococcus. Pus was found in all cells at operation, with several areas of bone softening. The zygomatic root was explored, but was found to be normal. Following the operation the patient was in no way improved, since the facial pain became more acute. Morphine afforded short relief, and the patient was constantly shrieking with pain. These symptoms continued for two weeks, during which time swelling appeared in the right side of the face, with a gradual increase of temperature and leukocytosis. A definite subdermal fluctuation was seen over the junction of the middle and posterior thirds of the zygoma. While the anesthetic was being administered, in preparation for incision, the abscess accidentally ruptured into the mastoid wound. The immediate result was a reduction of the swelling and the patient showed a marked improvement. Within five days, however, all symptoms recurred. A crucial incision was finally made into the superficial portion of the abscess and a drain was inserted. Following this operation, the patient made an uneventful recovery. Strauss was of the opinion that the path of infection was either hematogenous or from some diseased or ruptured cells in the digastric groove of the mastoid process, or a similar mechanism and pathology occurring in cells occasionally found invading the petrous portion of the temporal bone.

McKenzie[4] reported a case of a boy eight years of age who was admitted to the hospital with a chronic suppuration of the left middle ear and a temperature of 103°. Although a radical mastoidectomy was performed immediately, this high temperature was not relieved. Two days later the wound was reopened and a small drop of pus on the floor of the external meatus was found to lead to an abscess in front of the bony meatus. This was opened and drained. However, the patient later developed cavernous sinus thrombosis which resulted in death. Autopsy showed an erosion of the outer wall of the jugular bulb leading to the site of the abscess in the pterygomaxillary fossa. There was no evidence of bone disease adjacent to the abscess. Dr. McKenzie was of the opinion that this was evidently a case of thrombosis of the jugular bulb which extended down the vein into the neck. The thrombosis had broken down and the pus had made its way through the wall of the bulb into the pterygomaxillary fossa.

The cases of abscess of the pterygomaxillary fossa just reviewed are the only ones I found recorded in the Index Medicus and the index catalogue of the Surgeon-General's Library. However, I wish to cite a few reports of cases of retropharyngeal abscess complicating otitis media and mastoiditis, since the pathway of infection may be the same.

Pearlman[5] stated that of sixty-one cases of retropharyngeal abscess admitted to the Sarah Morris Hospital during a five-year period, nine had otitis media, seven of which were on the same side as the abscess. He stated that the intracranial route is a rare source of infection; the direct source being more common. He pointed out that the pus may escape by way of the floor of the antrum or through the anterior bony auditory canal wall with possible involvement of the temporomandibular joint, or it may enter the posterior fossa through the posterior wall of the antrum and travel downward. It may pass along vessel canals by bone destruction. He believed that the semicanalis musculis tensoris tympani served as a pathway for the infection.

Schoeneman[6] reported a case in a man, thirty-five years of age, who had a chronic suppuration of the middle ear and a mastoiditis with a periodic discharge through a sinus above the tonsil.

Cunningham,[7] in discussing retropharyngeal abscess complicating otitic infections, considered the lymphatics as one of the routes by which infection from the ear may pass into the pharynx.

He listed the following five routes in which an otogenic retropharyngeal abscess may occur: (1) by infection of a retropharyngeal lymph node; (2) by direct extension from a necrotic area in the mastoid process; (3) by direct extension forward from a middle ear infection (he did not say how this could be accomplished); (4) by the exit of an extradural abscess from the cranial cavity; and (5) by the secondary burrowing of a Bezold's abscess.

McKenzie[8] stated that the infection of the retropharyngeal lymph nodes with suppuration of the ear is not uncommon in infants, and even in adults one frequently sees unilateral swelling of the posterior pharyngeal wall. He stated that an otogenic abscess might arise in the pharynx: (1) by direct extension through the temporal bone, (2) by way of the foramen lacerum, (3) by direct extension from the pneumatic cells in the mastoid to the under surface of the occiput and thence to the pharynx, or (4) indirectly by the wandering of an extradural abscess of the posterior cranial fossa to the suboccipital region.

Piersol[9] stated that the parotid lymph nodes drained the middle ear cavity and that the connection of the parotid lymph nodes with the internal maxillary lymph glands situated in the pterygomaxillary fossa, would explain the lymphatic pathway of infection.

There is one other pathway by which I believe infection could pass from the middle ear to the pterygomaxillary fossa, which I have not found mentioned in the literature; is it not significant that the chorda tympani nerve passes from the cavum tympanum to the pterygomaxillary fossa, by way of the fissure petrotympanica or Glaserian fissure. Wendell Phillips[10] and Piersol stated that the osseous portion of the auditory canal is not present at birth, but is represented by a partially formed bony ring, the annulus tympanicus. In the development of the osseous canal a dehiscence filled with fibrous tissue remains between the lower periphery of the ring and the bony ring which forms the outer section of the anterior and lower wall of the meatus. This dehiscence usually becomes filled by bone at the third year, but occasionally bony union never becomes complete. It is this union that forms the Glaserian fissure. It therefore seems logical that infection could pass into the pterygomaxillary fossa by this route.

Report of Case

A. K., male, thirty-eight years of age, came to my office May 7, 1927, stating that he had had a severe pain in the right ear since 3:00 a. m. Membrana tympani showed a slight injection of the manubrium and loss of lustre, with no bulging. There was no tenderness over the mastoid and no fever. The patient was given some 5 per cent phenol in glycerine and told to return the next day if there was no improvement or if his condition became worse. The following day the temperature was 102°, there was considerable injection and bulging of the posterior inferior segment of the membrana tympani. Paracentesis was done and the patient made a good recovery, with the membrana tympani healing by May 19. Two days later the patient returned, complaining of a slight pain and feeling of fullness in the right ear. There was no fever but there was a slight injection of the drum with a marked bulging in the region of the old scar. Following the incision, a slight discharge of serum was noted, and the pain was immediately relieved. On May 23 the perforation was healed; color and landmarks were practically normal. On June 6, two weeks later, the patient returned to the office, this time complaining of a severe pain in the region of the right zygoma, which was aggravated by movement of the jaws, and a slight pain on swallowing. He stated that this pain began two days before and had gradually become more severe until now it was becoming unbearable. There was a slight swelling just above and below the zygoma which was somewhat tender to pressure, although there was no redness or sense of fluctuation, and the drum was normal except for a slight injection of the manubrium. His temperature was normal. The leukocyte count was 11,000. Two days later the swelling had increased so that there was a definite depression in the region of the zygoma although there was no redness or induration. The temperature remained normal. The patient could not open his mouth more than an inch because there seemed to be a rigidity of the muscles, and pain which was especially severe on movement of the mandible and on swallowing. There was a distinct swelling seen on the posterior wall of the pharynx on the right side, but no fluctuation could be elicited there. The drum was slightly injected, there was some bulging, and fluid could be seen in the middle ear cavity on a level with the umbo. A paracentesis was done and clear serum was discharged. During the next three days the swelling continued to increase, mostly above the zygoma. There was no pitting on pressure or fluctuation at any time. The intense pain could not be relieved by morphine; the patient was unable to open his mouth and there was difficulty and very severe pain on swallowing. Findings at this time were: temperature 99°, pulse 112, red cells 4,521,000, leukocytes 16,000, polymorphonuclears 64 per cent. An x-ray of the mastoid and zygoma was negative. On June 10, six days after the beginning of swelling, an incision was made along the upper margin of the zygoma. The fibers of the temporal muscle were separated and on dissection downward under the zygoma over the temporal crest, pus began to well up. A grooved director was passed downward about two inches from the zygoma into an abscess cavity in the pterygomaxillary fossa. A soft rubber drain was placed in this cavity. There was very little drainage and the next day the patient had obtained almost complete relief from pain and had little diffi-

culty in swallowing. The drain was removed after four days and the wound healed in a week.

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THE DIAGNOSIS AND MANAGEMENT OF LARYNGEAL OBSTRUCTION*

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Dyspnea of laryngeal origin is not an uncommon condition encountered by the otolaryngologist. It very frequently presents itself with such speed and intensity that life-saving measures must be instituted immediately to prevent asphyxiation. At other times, however, it appears and progresses deliberately, allowing time for an accurate diagnosis and a careful decision as to the type of treatment to be employed.

The procedures for the relief of the dyspnea are tracheotomy, intubation, laryngoscopy, bronchoscopy, and several non-surgical measures. Which of these to follow and the time of their institution presents a very difficult problem causing considerable anxiety and mental chaos before it is solved.

The management of these cases depends to a great extent upon the exciting factor or the primary cause of the dyspnea. This may be a foreign body, a membrane or an inflammatory edema.

It is the purpose of this paper to discuss briefly the diagnosis and treatment of the various types of obstruction and the advantages and disadvantages of the various procedures for their relief. In reviewing the literature one cannot help noticing the many differences of opinion concerning the treatment of these cases. Some men favor tracheotomy and some intubation. Each case, however, is a problem in itself and must be handled by the physician in the manner which will prove most satisfactory under the existing conditions.

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DIAGNOSIS

It does not require an experienced laryngologist to make a diagnosis of laryngeal obstruction, but the establishment of the etiology usually requires the services of one trained in making laryngoscopic examinations.

Some of these patients are not seen until they are in the stage of extremis, as evidenced by the severe dyspnea and cyanosis. When in this condition there is no time for any procedure other than one giving immediate relief, namely, tracheotomy or intubation. In most cases, however, there is time for an examination of the larynx either by direct or indirect methods, depending upon the skill of the operator and the tractability of the patient.

Indirect laryngoscopy, which is very satisfactory in adults, is almost impossible in children; when applicable, however, it is very useful in making a diagnosis. We are able to locate the level of the obstruction and to determine the presence or absence of a foreign body in the upper respiratory tract. A diphtheritic membrane may be seen if present and we can determine whether or not any other pathologic processes are present. It has several advantages over the direct method. Examination with the mirror is much less disturbing to a patient who is already apprehensive. It requires fewer assistants, a smaller armamentarium and it can be done in almost any environment on a moment's notice. Direct laryngoscopy, on the other hand, requires one or two assistants. It necessitates more technical skill and care, and the fact that considerable time is required, prohibits its use in many cases.

MANAGEMENT

Having made the diagnosis, determined the level of the obstruction, the presence or absence of a foreign body and the type of pathology, we must decide immediately upon the line of treatment to follow. Will palliative measures be of any avail and when should more radical procedures be instituted? The tendency is always to wait, to postpone the more drastic measures until the patient begins to show signs of extreme asphyxiation, and then rush madly ahead, disregarding asepsis, hemorrhage and other details of surgical technic. More of these patients die because of procrastination on the part of the physician than for any other reason, and if we could only learn that the time to do the tracheotomy is early, while the patient is still in good condition, I believe we would lower our mortality rate to a surprising degree.

An illustration of such an unfortunate happening is the case of a man about seventy years of age, who prior to his illness had been in excellent

health. He developed a very slight cold and complained of his throat being a little sore on swallowing. Examination revealed a slight redness of the pillars and the posterior pharyngeal wall; the tonsils were small and innocent looking and there was no sign of any membrane present. The cords showed some hyperemia and there was possibly some swelling in the aretynoid region. The temperature was around 99°. Following some local treatment he felt fairly well and wanted to go to work the next day. That night, however, his throat pained him slightly, felt swollen and he complained of some dyspnea. Examination the next morning revealed considerable swelling of the tip of the epiglottis, extending down into the aretynoid region. The cords were slightly reddened but not remarkably so. He was immediately taken to the hospital and palliative measures were instituted. After a short while his condition seemed to be markedly improved so far as the dyspnea was concerned. He felt very comfortable and thought possibly that he might be able to sleep. Two hours later he suddenly became worse, his dyspnea was extreme, he was restless and frantically trying to breathe, and was deeply cyanosed. Immediate tracheotomy was performed with the patient in bed. Respiration ceased and the pulse became imperceptible before the tube could be inserted. A stab incision opened the trachea, and with artificial respiration his condition improved rapidly. There was some troublesome hemorrhage from the wound and he was taken to the operating room for its control. Scarcely a minute or two after arriving, his respiration ceased and the heart sounds could not be heard. Stimulation and artificial respiration were of no avail. A postmortem examination was not permitted but death was apparently caused by an acute cardiac failure. The question in a case of this kind is, of course, how long are we justified in maintaining our palliative treatment and upon what symptoms and signs should we employ more radical measures.

In this case there were no signs to indicate that the dyspnea would suddenly become so severe, yet when it began to progress it increased with such intensity that death ensued almost before the trachea could be opened. Increasing dyspnea as shown by retraction at the suprasternal notch and in the interspaces, associated with an increase in the cardiac rate, indicates impending exhaustion. Extreme restlessness and the change in color, from pallor to cyanosis, make the picture very grave and should be a warning that palliative measures have failed.

Fortunately, most cases are seen early enough so that we are able to establish a diagnosis and outline the treatment to be followed. Our discussion of the various types of cases will be from this standpoint.

STREPTOCOCCUS LARYNGITIS

First may be mentioned those cases where the obstruction is caused by a specific or local infection in the throat, such as streptococcus laryngitis. This condition usually appears suddenly, presenting besides the dyspnea, all the signs of a profound toxemia. It may be ushered in with a chill followed by a sudden rise in temperature to 103 or 104 degrees. There is general malaise and extreme prostration. The throat is usually quite painful and the mucous membrane of the pharynx and larynx are fiery red and swollen. The swelling may extend beyond the larynx into the trachea and as the edema progresses, the dyspnea appears. The epiglottis may be so edematous as to hide the cords entirely. Palliative measures may be tried if the condition permits, but they are usually of little avail in these cases. In our zeal to combat the dyspnea we must not overlook the toxemia. Fluids should be given either by rectum or by hypodermoclysis. Streptococcus vaccines have proved valuable and should be given a trial. The application of an ice ring to the neck will help to allay the pain and make the patient more comfortable. Steam inhalations may be of value in keeping the secretions from drying and forming crusts. With the first signs of increasing obstruction, intubation or tracheotomy should be done. There is considerable discussion as to which is the procedure of choice, since each has advantages and disadvantages. We hesitate to open the trachea in an area that is already infected for fear of producing an extension of the septic process. On the other hand, intubation may be difficult to perform because of the swelling. The tube is difficult to keep in place and requires the presence of a trained intubator at all times. It must be removed and cleansed at frequent intervals because of the tenacious secretions encountered in this type of laryngitis. The canula of a tracheotomy tube can be cleansed and reinserted with very little disturbance by a nurse. Whether or not tracheotomy favors extension downward of the infection we cannot say, but these patients usually develop a tracheobronchitis with the production of secretion and crusts, the removal of which is a problem in itself. Various procedures have been tried, the most efficacious being the installation of saline solution to loosen the secretions and the use of the suction pump to remove them. Ephedrine inhalant dropped into the tube has proved very useful at times in preventing crust formation. Everything taken into consideration, tracheotomy, in most

cases, will prove more satisfactory than intubation, because it can usually be accomplished with little or no difficulty. Decanulation may require a few days' time but this should not be a contraindication.

A very good illustration of this type of case was that of a little girl, about four years of age, who prior to her acute illness had been in good health. Quite suddenly one evening she became very dyspneic, exhibiting all the signs of extreme asphyxiation. Her condition was so precarious that she was immediately sent to the hospital. The severity of the dyspnea did not permit an examination and an emergency tracheotomy was done. She improved immediately; her color was good; respiration became slower and more quiet; the temperature was 102°, and the pulse was quite rapid. On the following day, indirect examination of the larynx revealed a marked congestion of all the mucous membrane. The epiglottis was quite edematous, almost hiding the swollen cords from view. There was no sign of any membrane, foreign body or secretions. The chest findings were those of a bronchopneumonia. She was put into a croup tent and given inhalations, fluids were forced and pneumococcus vaccine administered. Her condition was very satisfactory throughout that day and the next, aside from a troublesome cough and the tenacious secretions which necessitated frequent removal and cleansing of the canula. The night of the second day her dyspnea reappeared. Removing and cleansing the tube was useless because the obstruction was at a much lower level. The condition became so extreme that there was practically no exchange of air. Ephedrine drops were instilled into the trachea in the hope that they might lessen the swelling. A soft rubber catheter attached to a tonsil suction pump was inserted until the obstruction was met. Some secretions were removed and some very large crusts were coughed out immediately after removing the tube. The dyspnea soon disappeared and she was again quite comfortable. The next day, because of the tenacious mucus, the tube was removed several times. In the evening she had a repetition of the dyspnea experienced the previous night. The same measures were carried out with gratifying results. Following this she made an uneventful recovery and decanulation was performed without further trouble. Intubation would have been extremely difficult in this case because of the swelling and would have been very unsatisfactory because of the secretions.

QUINSY, RETROPHARYNGEAL ABSCESSES, CERVICAL ABSCESSES

Quinsy, retropharyngeal abscesses and cervical abscesses, occasionally will produce an obstruction by their mechanical interference. In many cases this obstruction can be relieved by incision and drainage of the abscess. Intubation may be useful in these cases to tide the patient over until drainage can be accomplished. If a tracheotomy is to be performed, however, it must be kept in mind that the anatomy is very likely to be distorted; the trachea may be pushed to one side or the other and the large vessels may be forward. The procedure of choice here depends entirely upon the findings and the operator's judgment.

NEW GROWTHS

An entirely different type of obstruction is that caused by new growths such as tuberculosis, lues, polypi and malignancies. The indication in these cases is to rest the larynx as well as to afford an air passage. The fact that these conditions are more or less permanent, eliminates intubation as a possible procedure. The tube is always a constant source of irritation and does not permit any local treatment without removal.

OPERATIVE TRAUMA

Laryngeal obstruction following operative trauma such as bronchoscopy, laryngoscopy, and esophagoscopy is one of the most frequent indications for tracheotomy. Even though the procedures are performed skillfully and rapidly, the edema may appear suddenly and become alarming in a very short time. In many of these cases we feel that the condition is only transitory and that the intubation tube will suffice until the swelling disappears. Occasionally this assumption is correct but more often we find that the tube seems to produce more swelling, even to the extent of necessitating tracheotomy. Extubation may be difficult because we find that the swelling still remains when we remove the tube, and we must necessarily reinsert it. Each time that this is done, the edema increases and to prevent ulceration with resulting stenosis, tracheotomy must be performed in order to remove the tube. Another factor in these cases which makes tracheotomy preferable to intubation, is the troublesome secretion present especially if the foreign body has been organic material.

ANAPHYLACTIC AND ANGIONEUROTIC TYPE OF EDEMA

Another very distressing type of obstruction is that caused by the so-called anaphylactic and angioneurotic type of edema. Some observer has stated that almost 35 per cent of the angioneurotic

edema patients die before tracheotomy can be performed. This obstruction usually comes on suddenly with no apparent etiology. Intubation might prove satisfactory if it were possible to perform, but because of the intense swelling it is usually out of the question. It should be tried first because tracheotomy offers some undesirable features, such as the possibility of producing pneumonia, an ugly scar or a stenosis following removal of the tube.

EDEMA FROM FOREIGN PROTEINS

Very similar to this type of edema is that seen following the injection of serums containing foreign proteins. The dyspnea appears suddenly and progresses to almost complete obstruction. Many of these cases can be relieved by the use of adrenalin. A very interesting case of this type was that of a child about four years of age who had been receiving some toxin-antitoxin injections. A few days after the first injection, a mild dyspnea appeared which progressed until it became dangerous. Some ephedrine drops were administered to the nose and throat of the child and slight improvement was noted. The dyspnea reappeared in a short time and was more severe. Her condition became so alarming that she was transferred to the hospital where emergency measures could be resorted to if palliative treatment failed. Following the use of adrenalin hypodermatically and steam inhalations, her condition improved and she made an uneventful recovery. If immediate improvement is not noticed, however, operative procedures should not be delayed, because children do not stand air hunger for any length of time without harmful results.

There is also an edema that appears in cases of acute nephritis. It is usually slow in progression and does not require immediate attention.

SUMMARY

This briefly reviews the etiologic factors producing laryngeal obstruction and the methods for relief. From reviewing the literature and from our own limited experience we have arrived at the following conclusions:

1. A direct or indirect laryngoscopic examination should be done in all cases, if possible, before surgical measures are instituted.
2. The patient's condition should not be allowed to become grave before either tracheotomy or intubation is performed. In all severe obstructions tracheotomy should be done immediately.
3. Tracheotomy is safer in unskilled hands and is satisfactory in far more cases than is intubation.
4. Intubation requires more technic and some one who can reinsert the tube if necessary must be in constant attendance.
5. Intubation cannot be done in a certain number of cases because of the swelling.
6. Each of these procedures has its place and each case must be treated according to the indications at hand.

THE STRATEGIC POSITION IN THE TREATMENT OF SYPHILIS*

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It has been stated by Fordyce and reiterated by Hazen[1] that syphilis is primarily a disease of the blood vessels, that even the chancre is an endarteritis and a panarteritis and that other lesions usually begin in perivascular lymph spaces. Since processes occurring in each syphilitic lesion concern both serum tests and treatment, there must be an understanding of the concrete activity in the discrete lesion. The spirocheta pallida makes entry as a rule by way of a minute abrasion of the skin or mucous membrane. It is thought that through a toxin its presence acts as an alarm to the defensive forces of the body. There results a hyperemia, an accumulation of lymphocytes, which may be regarded as a part of the police force of the body, plasma cells, and a serous exudate. Cells are destroyed by the toxin of the spirochetes and fixed and connective tissue cells proliferate, finally forming fibrous tissue. Undoubtedly the large army of lymphocytes, which is transported to the portal of entry of the spirocheta pallida, is present to protect the body from further invasion of the intruder, acting as a physical barrier and liberating an immune substance created by the action of the spirochete on the lymphocyte. This substance, which, it is believed is produced by the lymphocyte in the site of the lesion, is spirocheticidal in character, but it is not of sufficient potency nor is it liberated in large enough quantities to kill all the spirochetes, or to prevent them from multiplying. However, it is thought that this substance has an influence in modifying their invasiveness. Another substance produced at the site of the lesion from the interaction of the spirochetes, lymphocytes, and fixed cells, is the antibody causing the Wassermann reaction. This antibody is not spirocheticidal in character, and tends to disappear with the lessened activity of the spirocheta pallida. A true immune body increases with the latency of the disease and Eberson[2] has shown that the spirocheticidal substance does increase with latency of the disease.

From the original focal lesion the spirochetes enter the lymph spaces and are carried through the lymph channels to the nearest lymph glands. In

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the lymph glands the organisms migrate into the small blood channels and are carried through the veins to the right heart, then to the lungs and back to the heart, from which they are pumped into the ramifications of the arterial system, the extent of the spirochetemia depending upon the number of organisms. The organisms finally come to the thin-walled blood channels and may lodge in an injured spot or pass through the intercellular spaces into the perivascular space. There the story of the original lesion is repeated. The disease may spread by direct extension along the interstitial spaces as well as by means of the lymph spaces.

Apparently the preference of the spirochete is usually for injured tissue. There also appears to be a difference between men and women as to the organs involved. The late Dr. Warthin[3] made extensive observations on this phase of infection. He was of the opinion that in men, the heart, the aorta, the testis and the central nervous system were the customary locations of the activities of the Treponema pallidum; while in women, the liver, the adrenals, the spleen, and the rectum were the more common places of infection. In his many autopsies he never saw a syphilitic lesion of the ovary. The kidneys of the female are more likely to be involved in the secondary stage than those of the male. In the secondary stage there are great numbers of lesions in the skin but these may be more fleeting in women than in men.

Because the immune substances formed in the sites of the syphilitic lesion are not effective in bringing about a cure of the disease, outside treatment has to be undertaken. The drugs employed in the therapy of syphilis tend to depress the immunizing activity of the body and for this reason it is of paramount importance that the treatment instituted be sufficient not only in the type of chemical used, but also in the duration of administration. Brown and Pearce[4] found in conducting syphilitic experiments on rabbits that the lymph glands were involved early, and that excision of the testis, the site of the original lesion, caused a virulent generalized infection. The rabbit was deprived of the immune substances formed in the site of the original lesion and there was no time for new immune bodies to be formed before extensive invasion occurred. It is believed that if only a small amount of treatment is given to the syphilitic patient, he is deprived of both the immune forces and the chemical spirocheticidal elements, and is therefore left a prey to a virulent and extensive infection.

In undertaking treatment it is desirable to use a chemical which will destroy as many spirochetes as possible, and as rapidly as possible, for in treating the patient with early syphilis an ultimate cure is our goal. Arsphenamine and neoarsphenamine are the drugs of choice. If treatment can be started before the Wassermann reaction is positive, the chances of cure are greater than if it is delayed until the Wassermann has come into the positive zone. If the Wassermann test is positive at the time treatment is started it will often become negative after eight to twelve injections of arsphenamine. When the Wassermann reaction becomes negative it simply means that all the substance that has been produced by the activity of the spirocheta pallida has been eliminated from the blood stream; that a sufficient number of organisms have been destroyed so that the antibody is eliminated faster than it is manufactured. It was after a course of six, eight, or ten injections of arsphenamine, according to the older methods of treatment, that a good rest was given the patient. The rest period was often six weeks or two months. At this point there is no assurance that all the spirochetes have been killed. By withdrawing all medication for six weeks or two months, the patient is left with depression of his own immunity protective force and without any outside assistance. The spirochetes that are left alive have full opportunity to revive and scatter, becoming more firmly established and more widely disseminated by new invasions of the blood stream, setting up new lesions. For this reason, I call the position of the first negative Wassermann reaction the *strategic position*. The final outcome of the case depends, to a large degree, on what is done at this point.

Dr. Joseph Earle Moore,[5] from his work with syphilis at the Johns Hopkins Syphilis Clinic, found that of the patients with early syphilis who received intermittent treatment, that is alternating rest courses and treatment courses, 11.8 per cent developed clinical recurrences and 32 per cent Wassermann recurrences. Of those patients who received the continuous method of treatment; that is changing directly from arsphenamine to bismuth or mercury and from these drugs back to arsphenamine, only 2.6 per cent developed clinical recurrences and 3.1 per cent had Wassermann recurrences. Out of 5,952 cases of early syphilis from five large syphilis clinics,[6] there were 360 mucocutaneous relapses. Of these, 81 per cent had received less than fifteen injections of arsphenamine. It is also of interest to note, in connection with the development of the patient's immunity forces, that the mucocutaneous relapses occurred in 10 per cent of the patients who had negative serology at the time treatment was begun, in 8.55 per cent of patients who had positive serology but were still in the primary stage, and in 4.16 per

cent of those who were in the florid secondary stage. It would appear that the developed resistance on the part of the patient diminished the danger of relapse, particularly in the inadequately treated patient. In the light of these facts the physician's responsibility is all the greater in beginning treatment and interfering with the immunity forces of the patient. The treatment must be adequate if the patient is to be benefited.

The argument for intermittent treatment has always been that the spirocheta pallida becomes resistant to arsphenamine if it is given continuously for too long a time. This is true, but the effect passes off quickly and the time of rest from the arsphenamine injections can be taken up by bismuth or mercury medication. In the early stage of treatment the interval need not be longer than four weeks.

From the work of the late Dr. Warthin[7] and of others, it would appear that the spirocheta pallida possibly exists in granular forms and in transitory forms between the usual spirals and the granular stage. If this is true it will eventually throw light on some of the difficult problems in syphilis.

In considering the treatment of syphilis, the somewhat detailed study of a few typical cases of certain phases, over a period of years may be helpful.

Patient No. 1, after negative Wassermann reaction, stopped treatment for two months and a half. At the end of this long rest period, the Wassermann reaction was strongly positive. When a negative Wassermann finding has reverted to positive, it is usually more difficult to obtain a second negative. One of the difficulties of this patient was his great sensitivity to arsphenamine and the distress caused by it. He could, however, have tried out other drugs, such as bismuth. His great discouragement interfered with benefits he might have received. In spite of difficulties in medication the patient received a second negative Wassermann reaction under treatment. He again allowed too long a time to lapse before continuing medication and the benefits were lost. Today he is a chronic syphilitic.

Patient No. 2, a dentist, like patient No. 1, a physician, received infection in his hands from working on syphilitic patients, but in the second case treatment was practically continuous and sufficiently prolonged. He now appears cured.

Patient No. 3 was in the secondary stage when treatment was begun and his immunity forces had had time to develop. He responded quickly to treatment, but the total amount was very small, only nine injections of neoarsphenamine being given in the early phase of the treatment. He was a physician, yet even before his Wassermann test was entirely negative, he ceased the neoarsphenamine injections and relied on mercury by mouth to complete the cure. Although his resistance lasted five years, in the end he reverted to the positive zone. He has now been negative more than two years and treatment has been withheld for less than a year.

Patient No. 4 received adequate treatment. He had 39 injections of arsphenamine the first year, with a total of 45 injections. The rule is to push arsphenamine the first year so that all the spirochetes will be killed if possible before they become intrenched in fibrous walls of tissue. This patient's treatment continued until he had been negative for more than a year. Time will tell whether the negative position will be maintained.

Patient No. 1 has been reported in two former papers.[8 and 9] He was a physician who on January 13, 1922, had had a sore on his thumb of five weeks' duration. The dark field showed the Treponema pallidum and the Wassermann test was strongly positive, titrating 14 plus and rising to 17 plus after the first injection of arsphenamine. Between January 13 and 24, inclusive, the patient received

CHART FOR PATIENT NO. 1.

Wassermann Readings			Arsphenamine and Neoarsphenamine Injections (Dosage for arsphenamine, 0.6 gm. at first, then usually 0.25 gm.) (Dosage for neoarsphenamine, usually 0.6 gm.)
1922, Jan. 13	4 4 4 2	14 plus	Jan. 13 to Jan. 24, 1922 4 injections of arsphenamine.
1922, Jan. 20	4 4 4 4 1	17 plus	Jan. 28 to April 25, 1922 12 injections of neoarsphenamine.
1922, Apr. 15	—		
1922, May 20	—		
1922, July 31	4 4 4 1	13 plus	Aug. 7 to Oct. 14, 1922 10 injections of arsphenamine.
1923, Jan. 23	—		
1923, May 31	4 4 4	12 plus	
1923, Oct. 16	4 2	6 plus	Oct. 13, 1923 2 injections of neoarsphenamine.
1928, Aug. 29	4 4 4	12 plus	Aug. 30 to Oct. 8, 1928 5 injections of arsphenamine.

four injections of arsphenamine. He was very sick after these injections and a change was made to neoarsphenamine. The reaction to neoarsphenamine, while far from being satisfactory, was less distressing than that from arsphenamine. From January 28 to April 25, inclusive, he was given twelve injections of neoarsphenamine. During this period he had an occasional injection of mercury salicylate. The Wassermann test was negative on April 15 and May 20, and the patient had no treatment between April 25 and August 7. The Wassermann test of July 31 was strongly positive, titrating 13 plus. Ten injections of arsphenamine were given between August 7 and October 4, inclusive. He was desperately ill after each injection and occasionally there was no weekly treatment because of this illness. The arsphenamine was discontinued and he was given mercury salicylate injections, two a week, which sick after each injection, he became discouraged and stopped treatment.

This patient lapsed from observation for nearly five years and was not seen again until August 29, 1928. At this time he had a strong positive Wassermann reaction, titrating 10 plus, and he had several skin lesions. He received five injections of arsphenamine, in small doses of 0.3 gm. or less, but he was so ill after the treatments that he stopped taking them, and has lapsed from observation since that time.

Patient No. 2, a dentist, had a sore on the finger of less than three weeks' duration at the time he first came under observation on October 27, 1922. The dark field showed the presence of the Treponema pallidum. The Wassermann test was weakly positive with the cholesterolized antigen which became 3 plus after an injection of arsphenamine. It was also 1 plus in the Kolmer and plain alco-

CHART FOR PATIENT NO. 3

Wassermann Readings			Neoarsphenamine and Arsphenamine Injections (Dosage of arsphenamine, usually 0.4 gm.)
1923, Mar. 23	4 4 4 4 4	20 plus	Mar. 23 to May 15 9 injections of neoarsphenamine.
1923, Mar. 30	4 4 4	12 plus	
1923, Apr. 6	4 4	8 plus	
1923, Apr. 14	4 4	8 plus	
1923, Apr. 21	4 4	8 plus	
1923, Apr. 27	4 2	6 plus	
1923, May 4	4—		
1923, Sept. 24	—		
1924, Feb. 15	—		
1924, Aug. 11	—		
1925, July 28	—		
1926, Feb. 18	—		
1926, July 29	—		Aug. 1 to Dec. 15, 1926 6 injections of arsphenamine.
1927, Oct. 5	—		
1928, July 27	4 4	8 plus	July 27, 1928 to Jan. 21, 1929 15 injections of arsphenamine.
1928, Nov. 8	1		
1929, Jan. 16	—		Jan. 24 to Mar. 25, 1929 8 injections of arsphenamine.
1929, Apr. 24	—		Apr. 24 to May 29, 1929 6 injections of arsphenamine. Sept. 16 to Nov. 4, 1929 6 injections of arsphenamine. Oct. 1, 1929, to Jan. 19, 1930 11 injections of arsphenamine.
1929, Sept. 10	—		
1930, Mar. 14	—		
1930, Oct. 30	—		
1931, Sept. 29	—		
1931, Oct. 14	Spinad Fuid. —		

he tolerated well. This form of medication continued until January 22, 1923. The Wassermann reaction at this time was again negative and the patient rested from treatment until May 31. The Wassermann test on May 31 was again positive, titrating 12 plus. He returned to the mercury salicylate injections which were continued for some weeks but the patient developed a sensitivity for the drug and ceased treatment. He rested until October 13, when he received two injections of neoarsphenamine. However, since he was very holic antigens. Four injections of arsphenamine were given between October 27 and November 9, inclusive. On November 9 the Wassermann reaction was entirely negative and has been negative ever since. Tests have been made every year with the exception of 1927 and 1930.

This patient received 20 injections of arsphenamine the first year. With the exception of one month, he was receiving either arsphenamine or some form of mercury throughout the first year. His treatments continued through the second year

and into the third with longer rest intervals. He had no arsphenamine in the third year.

By November of this year (1932) this patient will have maintained a negative serologic finding for ten years and as he has shown no evidence clinically of any luetic infection during this period, it would appear that he might be considered cured. This patient was first reported in a former paper.[9]

Patient No. 3 came under observation March 23, 1923. He had the rash of the secondary stage. Between March 23 and March 30, inclusive, he received three injections of neoarsphenamine, dosage 0.6, 0.6, and 0.9 gm. respectively. From April 4 to May 15, inclusive, he received six injections of neoarsphenamine with a dosage of 0.9 gm. each. He applied mercury inunctions, usually every other day, between March 23 and May 15. On May 4 his Wassermann test was less than 4 plus and was entirely negative September 24, 1923. From May, 1923, to January, 1924, protiodide of mercury was taken by mouth to the extent of toleration. Beginning in January, 1924, the patient applied six mercury inunctions. There was no medication after the mercury inunctions of January, 1924, until August 1, 1926. As a precautionary measure the patient received six injections of arsphenamine about three weeks apart in the fall of 1926. Through this entire period he took protiodide of mercury by mouth. There was no further treatment until the summer of 1928. In July, 1928, the Wassermann and Kahn precipitation tests were strongly positive and the patient began an intensive course of treatment. From July 27, 1928, to January 24, 1929, he was given fifteen injections of arsphenamine. From January 24, 1929, to March 25, 1929, he alternated between mercury salicylate and arsphenamine injections. During this period eight arsphenamine injections were given. The Wassermann reaction was again negative on January 16, 1929, and the Kahn test was plus, minus. By April both the Wassermann and Kahn tests were entirely negative. Between April 24 and May 29, six injections of arsphenamine were given, and in June and July, eight intramuscular injections of bismuth tetrabinitrate, an aqueous preparation. He rested from all treatment in August and resumed arsphenamine injections on September 16, receiving six injections. Mercury salicylate was given from November 12 to December 26, 1929. There was no further medication until March 24, 1930. During the rest of March and through April eleven injections of bismuth tetrabinitrate were given, and from July 7 to August 22, 1930, twelve injections of colloidal bismuth were given intramuscularly. He rested from treatment in September. Arsphenamine injections were resumed in October and continued until January 19, 1931, during which time nine were given. From February 2 to March 20, the patient received twelve injections of colloidal bismuth intramuscularly. He rested through the summer and was given three injections of mercury salicylate in the fall. There has been no treatment since December 7, 1931. This patient was reported in two former papers[8 and 9] and is presented at this time because he is the type of patient who apparently did well on a small amount of medication for several years, but lapsed into the positive serologic phase after nearly five years of negative history. In 1930 the fluoroscopic picture of the heart was normal and the electrocardiogram was normal. The spinal fluid was examined for the first time on October 14, 1931, since the patient was unwilling to have it done earlier, and was found to be negative.

CHART FOR PATIENT NO. 4

Wassermann Readings			Arsphenamine Injections (Dosage usually 0.4 gm.)
1928, May 29	4—		
1928, June 14	4 4 4 4 4	20 plus	
1928, June 22	4 4 4 4 4 4	24 plus	June 14 to Aug. 22 12 injections of arsphenamine.
1928, July 7	4 4 4 1	13 plus	
1928, July 19	4 4 4	12 plus	
1928, Aug. 2	4 4 2	10 plus	
1928, Nov. 1	—		Sept. 12 to Nov. 28 10 injections of arsphenamine.
1929, Jan. 16	—		Jan. 16, 1929, to June 12, 1929 17 injections of arsphenamine.
1929, May 2	—		
1929, Oct. 3	—		Oct. 3, 1929, to Nov. 27, 1929 6 injections of arsphenamine.
1930, Sept. 18	—		

Patient No. 4 was also reported in 1929 in a former paper.[9] He is representative of the average early case of syphilis. When he first came under observation he had a chancre of about three weeks' standing; the secondary stage had not yet appeared, and the Wassermann test was partially positive on May 29, 1928. Two weeks were lost when the patient should have been receiving treatment and he received his first injection of arsphenamine June 14, 1928. He received twelve in-

jections of arsphenamine between June 14 and August 22. Beginning in July he had weekly intramuscular injections of a mercurial salt. From September 12 to October 22, he received six injections of arsphenamine and from November 1 to November 28, he was given four injections of arsphenamine. He rested from treatment until January 16, 1929. Seventeen arsphenamine injections were given between January 16 and June 12, 1929. The patient received a total of 39 injections of arsphenamine during the first year of medication. The Wassermann and Kahn precipitation tests were both completely negative by November 1, 1928. The patient stood the treatment well and the longest rest from all treatment was for about a month, from the latter part of December, 1928, to January 16, 1929. The intramuscular injection of a mercury preparation was continued about three weeks after the arsphenamine injections were discontinued. They were also continued several weeks in the summer after the arsephenamine medication. Arsphenamine injections were renewed October 3, 1929, and continued until November 27, 1929. Mercury medication continued for several weeks. Treatment was received fairly strenuously for more than a year after the first negative Wassermann test and ceased at the end of 1929. On September 18, 1930, the serologic tests were still entirely negative.

Explanatory Note

The Wassermann tests were all made by the ice-box fixation method; the earlier work was with the four-hour system, and the tests of later years were by the fifteen-hour method. The plain alcoholic antigen was employed in the earlier titrations and the Kolmer antigen in the titrations of later years. The details of the tests and the method of estimating the positivity of the serum appear in former papers. [8 and 9] A reading of 20 plus means that one-tenth of a cubic centimeter of serum was 4 plus in the presence of ten units of complement. Two units of complement is the amount used in the routine test.

SUMMARY

In closing I wish to emphasize the fact that treatment of syphilis takes time. The point at which the first negative Wassermann test is obtained is the very period that treatment should be continued, for there is no assurance that all the spirocheta pallida have been exterminated. In the event that there is a rest of even two months from treatment, surviving spirochetes find a fruitful soil for activity, since the patient is left with his own immunity forces depressed and without the outside aid of spirocheticidal substances. That the spirochetes use this situation to become more firmly secured in the body is frequently shown, not only by clinical recurrences, but by early reversion of the blood to a positive Wassermann phase which often requires prolonged treatment before a second negative finding is obtained.

Because continued treatment at the time of the first negative serologic tests may result in ultimate cure or prolonged arrest it seems fitting that this point be called the *strategic position.*

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Case Report

TETANUS

HENRY H. HAMILTON, M.D., Cedar Rapids

The patient was a well developed and athletic boy of sixteen. His past history was negative. On December 22, 1932, between 9:00 and 10:00 p. m., he stepped upon a rusty spike embedded in a board lying on the ground near a cabin where the patient and some others were spending the night. The patient said nothing about the injury at the time, but early in the afternoon of the following day, December 23, his jaws began to ache. The next morning, December 24, he felt very ill and at noon told his mother that his head ached and that his jaws were sore. I was called at 2:00 p. m. and saw the patient at 2:45 p. m. At this time he had a minute cut on the ball of his left foot. There was no evidence of infection, but the area was tender on deep pressure. His mouth could be opened about fifty per cent and pressure over the angles of both jaws caused considerable pain.

The patient was taken to St. Luke's Hospital at 4:00 p. m. and was given one c.c. of antitoxin, subcutaneously. There was no reaction and at 4:30 p. m. he was given 20,000 American units (40,000 international) intravenously and 20,000 intraspinously. Fifteen c.c. of spinal fluid were

removed and two cells per cm. were found. The globulin test was positive, which is unusual. Under ethyl chloride, the foot was incised but no pus was found. The patient's temperature at this time was 98°, pulse 80, respiration 20. At 10:15 p. m. he had a slight twitching of the legs and head, and 12 c.c. of 25 per cent M_gSO_4 were given intramuscularly, but with no results, and at 11:30 p. m. the patient had a violent convulsion. I was called at 1:15 a. m., December 25, and as no intravenous sodium amytal was available he was given 24 grains orally. Within a few minutes he became so violent that a straight jacket was applied and 12 grains of sodium amytal were given at 2:00 a. m. Within a few minutes he became quiet and had no more convulsions. The next morning the straight jacket was removed.

At noon on December 25, he was given 20,000 units intravenously and 20,000 units intraspinously. At this time the spinal fluid spurted from the needle; 30 c.c. were removed and 3090 cells were found. The patient's pulse was 140, respiration 40, temperature 100.6° axillary. At 5:00 p. m. he was given 12 grains of sodium amytal orally. At this time edema of the lungs was marked and 200 c.c. of 25 per cent M_gSO_4 were given rectally in an effort to relieve this condition. The greater part of this solution was retained but it did little or no good, and at 10:45 p. m. he was given 40 c.c. of 50 per cent glucose intravenously in a further attempt to relieve the edema of the lungs. At 6:00 a. m., December 26, his breathing became easier and all evidence of edema disappeared. His temperature was 103°, pulse 144, and respiration 64. At 11:00 a. m. on December 26, he was given 20,000 units intravenously and 20,000 units intraspinously. At this time there was no increased pressure and the cell count had fallen to 1742 per cm. At the same time, 40 c.c. of 50 per cent glucose were given intravenously in an effort to restore the glycogen content of the spinal cord which supposedly is lowered in tetanus. At 5:00 p. m., December 26, the patient was given 40 c.c. of 50 per cent glucose intravenously and 18 grains of sodium amytal orally. The temperature was 104.2°, pulse 160, and respiration 48. At this time the patient seemed improved as his respirations were much deeper than during the morning. However, by 7:00 p. m. the pulse was 200, the temperature 105.6°, and the respiration 48, and quite shallow. The patient then failed rapidly and at 9:15 p. m., December 26, his temperature was 107.4° axillary, pulse 56, and respiration 44. The patient died at 9:32 p. m.

The points of interest in this case are: first, the brief incubation time, which was much less than twenty-four hours; second, the positive globulin test; and third, the perfect control of spasms by the use of sodium amytal.

PLEOMORPHIC BACTERIA

It has been the accepted teaching for many years that bacteria are of three classes; namely, the coccus, the bacillus, and the spirilla. We have recognized that there is a fourth group, which may or may not fit into the previous classification, and to this broad group we have applied the term filtrable virus. It has been considered that organisms of one group do not even under unusual circumstances resemble or assume the shapes of those of other groups.

A number of years ago when Rosenow, working at the Mayo Clinic, announced the isolation of the organism of infantile paralysis, his work was heralded with great acclaim. A short time later Flexner, working at the Rockefeller Institute, also isolated organisms that were shown experimentally to produce this disease, but strange to relate, the organisms did not maintain the shape described by Rosenow. Confusion existed since it was assumed that the two schools were dealing with entirely separate and independent organisms, and it was reasonable to suppose that each of these very different organisms could not be the cause of this disease. Time has indicated that both schools were correct, and that they were probably witnessing the same organisms, but in different stages of their life existence.

Confirmatory of the principle that bacteria do not maintain the same physical form throughout their existence, Miss Alice C. Evans, senior bacteriologist of the United States Public Health Service, has recently published her observations dealing with the organism of encephalitis lethargica. Weird as it seems, she has demonstrated that this organism is found at one time in the round or coccus shape, at another time as a rod or bacillus, and still again as a filtrable virus, so minute that it will pass through the ordinary Berkefeld filter. She has assumed that these various forms represent part of the regular life cycle of the organism, although she recognizes the fact that other factors such as age of the organism, type of food upon which it lives, temperature or moisture changes, or the relative amount of oxygen available for its growth, may govern these changes in size and shape. Most significant, however, to the scientific world is the demonstration on her part that these organisms are pleomorphic, and we can safely assume that if this is true for the organism encephalitis, it is equally true for organisms causing other diseases.

STATE HEALTH COMMISSIONER'S PAGE

D. C. Stuhlsatz, M.D.

A NEW COMMISSIONER

Dr. Walter L. Bierring, of Des Moines, has been appointed State Commissioner of Health and will begin his work in that office, July 1, 1933.

It is with satisfaction and pride that we review the activities, growth and results of the Iowa State Department of Health during the past five years. With the active cooperation of every physician in Iowa we predict even greater success for the future.

We take this occasion to bespeak our appreciation of the advice and assistance given the department in the past by individual physicians, and the numerous statewide organizations, as well as other groups and individuals interested in activities pertaining to public health.

We are happy to solicit the full cooperation of the physicians of the state for the incoming commissioner.

MORBIDITY REPORTS AND VACCINATION STATUS

The Iowa State Department of Health receives daily, reports of cases of infectious disease sent in by physicians, health officers and local boards of health from all parts of the state. At the beginning of each month, a morbidity report for the month previous is mailed to the office of the Surgeon-General in Washington, D. C. The report which goes to Washington, includes not only the number of cases of smallpox reported for Iowa, but in addition, the vaccination status of such cases. While some of the report cards give the desired information, less than ten per cent contain any comments after the printed statement, "number of times successfully vaccinated and approximate dates."

It would add greatly to the value of morbidity records, if more physicians, when seeing cases of smallpox, would ask about vaccination and examine the patient carefully for evidence of successful vaccination. Many persons who have been ill-informed question the efficacy of specific means of protection against smallpox. The opinion is current in some localities that successfully vaccinated persons are as prone to acquire smallpox as those who neglect or refuse vaccination. That smallpox affects only those who have not acquired immunity through a former attack or through fairly recent, successful vaccination, has been repeatedly and amply demonstrated. In spite of this fact, the disease continues to prevail in Iowa, and other midwestern states. What is the vaccination status of smallpox patients in Iowa? It would be a monotonous story if records were more complete. But let the report cards tell the tale!

PREVALENCE OF DISEASE

Disease—	Feb. 1933	Jan. 1933	Feb. 1932	Most Cases Reported From
Diphtheria	45	62	50	Polk, Woodbury
Scarlet Fever	175	142	223	Franklin, Polk
Typhoid Fever	2	7	4	Jasper, Polk
Smallpox	160	88	141	Dubuque, Dickinson
Measles	20	10	24	Montgomery
Whooping Cough	42	34	97	Woodbury, Des Moines
Cerebrospinal Meningitis	6	19	2	Woodbury
Chickenpox	161	204	196	Woodbury, Washington
Mumps	190	129	75	Black Hawk, Des Moines
Poliomyelitis	0	0	3	(For State)
Tuberculosis	26	26	28	(For State)
Undulant Fever	6	5	4	Jones
Syphilis	165	158	137	(For State)
Gonorrhea	142	170	211	(For State)

The JOURNAL of the Iowa State Medical Society
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THE ANNUAL MEETING

Another year has passed—a year of depression, of changing order, technocracy, social unrest, and scientific upheaval; a year of many economic vicissitudes and professional disappointments; a year of political and financial confusion. Now we have the promised "new deal" and with it a feeling of beneficence, of fraternity, and of good will toward our fellow man. With relief for unemployment, prosperity for the Iowa farmer, adjustments of monies and credits, and beer for the working man, it appears fitting, indeed, that the Iowa State Medical Society should hold its annual jubilee in Des Moines, and that every physician with sufficient gas in the tank should wend his way to the Capital City and make this meeting the beginning of a "new deal" in medicine for Iowa.

While it is perhaps true that you have less money to spend for such a trip, it is equally true that you will lose but little by being away from your practice at this time. The bank holiday is over. Rattle the youngster's bank again and preen yourself for three days of the finest entertainment in the form of postgraduate medical education that you have ever had, and do not forget that these annual meetings are the annual get-together, good-will occasions of the entire year. The committee on arrangements has kept prominently in mind the needs of fraternity and has made every effort to favor this phase of the meeting.

Conventions are good for all of us. They broaden our outlook. If we have become too complacent with our success, we are sure to see another who has done better. If we are at all disheartened, we shall receive new inspiration, new enthusiasm, new ideas, and we may even hear of someone who has made fewer collections than we have.

Des Moines is extending to the members of the Iowa State Medical Society, a most cordial invitation and will deliver the kind of hospitality which we have come to expect from the Capital City; and don't forget to bring the "missus" and the children. Entertainment has been provided for them (and, incidentally, it is really a remarkable time for shopping). The program committee has the scientific pot a'boiling, so bring along your mess-kit and enjoy your part of the feast.

ORGANIZED AMERICAN PHILANTHROPIES

Out of the newness and richness of American development has sprung a new order of aristocracy. It differs from old-world aristocracy in the fact that it is based upon accomplishment rather than ancestry. America, the land of opportunity, has furnished a new soil in which the seed of business, cultivated by thrift and perseverance, has yielded wealth in great abundance. This new American aristocracy furthering American ideals has exhibited a benevolence unrivaled in the rest of the world. Evidence of this generosity is everywhere at hand. No municipality is without its community chest. Hundreds of local philanthropic and benevolent projects are supported by popular subscription. Thousands of hospitals and schools are partly or solely endowed. Thousands of workers in the fields of research are maintained by the philanthropy of the American aristocracy. Philanthropies in this country have grown to such proportions that large and wealthy corporations have been organized to dispense the huge sums available from large bequests.

For the purpose of guiding the Trustees of the Twentieth Century Fund in formulating its programs of philanthropic projects, this organization has attempted an analysis of the larger foundations organized for philanthropic purposes in the United States,* detailing the money expended by these foundations, and practices to which this money has been applied. A total of 207 foundations were canvassed for this report, and 102 gave sufficient information to make a detailed analysis possible. The twenty largest foundations to report, showed $660,000,000 in capital funds, representing 85.7 per cent of the total known capital of all organized foundations.

American philanthropic foundations spent over $54,000,000 in 1931. This sum is some 23.6 per cent less than the amount spent in 1930 by the same group of foundations. During this period investments as a whole showed lower returns, and estimates from reliable sources indicate that the national income as a whole was reduced 20 per cent. Apparently money administered for philanthropic purposes has been well invested and well managed.

*American Foundations and Their Fields. Edition of 1932. Twentieth Century Fund, Inc.

Of particular interest to physicians are the figures pertaining to money spent in the field of medicine and public health. During the period of 1931, exclusive of administrative expenses, these foundations furnished over $17,000,000 to expand "the science and arts dealing with the prevention and cure or alleviation of disease." These grants did not include money spent for general relief purposes, for unemployment funds, or relief measures directed toward the 12,000,000 unemployed cared for during this period. Compared with the money spent in the field of medicine and public health for 1930, the $17,000,000 spent in 1931 represents a decrease over the expenditures in this field in 1930 of 42.9 per cent. It is of interest to note, however, that while funds available for research have been lessened, the amount available for social welfare has been increased.

Of the $17,000,000 spent in the field of medicine and public health, children's care ($107,886), children's clinics ($273,901) and funds for the investigation of diphtheria ($50,000), show material gain and represent some of the largest grants made by the several foundations.

The funds expended in the field of medicine and public health are analyzed in this report under fifty separate heads ranging from convalescent care ($350) to public health ($1,189,790). The report indicates $79,018 available for tuberculosis, $103,400 for kidney disease, and only $11,094 for cancer. To understand the apparent inequalities present in these figures one must appreciate the fact that in this report only money dispensed through grants to outside beneficiaries are tabulated, and these only from incorporated philanthropic foundations. Nowhere, perhaps, in the field of medicine have private philanthropies played a greater part than in the field of cancer research. Millions of dollars are spent annually through these channels and definitely fall outside the classifications considered in this report. It must also be recognized that in many instances the foundation may conduct expensive and costly investigations into cancer or other diseased conditions, and these funds would not be included in this report, since they would definitely fall in the administrative classification.

This compilation and analysis of data concerning the operation of American philanthropic foundations is unique in its field, and for this reason is of outstanding usefulness. The care exhibited in its compilation renders it authoritative. One can scarcely contemplate the proportions of the philanthropies cited, without thinking of the unselfishness and the benevolent affection toward mankind, exhibited by that great band of American aristocrats, which has made this work possible.

PERIODIC PAYMENT PLAN FOR HOSPITAL CARE

The growth of the American hospital has amazed the world. During the past thirty years the number of hospitals in this country has grown from approximately 1,000 to approximately 8,000, with a million beds for the care of the sick. These hospitals and their equipment are now valued at nearly $5,000,000,000. The public has made the hospital a public utility, and as such has interested itself in its expenditures and operations. That hospital cost has increased is not denied, but that the expense for hospitalizing the sick is exorbitant is hardly substantiated by facts.

The *Modern Hospital Magazine* made a study of 100 hospitals scattered over the country and proved that 10,000 full pay patients paid $72 for an average treatment of eleven days each; six dollars and fifty-five cents per day for hotel service of good character with all of the expensive additions which differentiate hostelry service from hospital service. If we but knew all the items of necessary expense that enter into hospital costs, we would agree that this average day charge is not excessive. "Keeping up with the Joneses" is the principal cause of unnecessary expense to patients. Demanding private rooms and special nurses, when ward service and general duty nursing would be as satisfactory and more in keeping with their incomes, constitute the chief extravagances of this large group of would-be Joneses. However, the public does not analyze these factors, but feels that the fees required by hospitals, even when no greater than those charged by a first class hotel, are out of bounds. Part of this is chargeable to the charitable atmosphere in which the hospital is rightly enshrouded, which causes the patient to believe that considerable funds from other sources are available for hospital maintenance. This is usually far from the truth, and if the hospital did not employ modern business methods in the collection of their accounts, they would soon close their doors in bankruptcy.

The Committee on the Costs of Medical Care has much to say upon the subject of hospitals and hospital service. They recommend a wider development of existing hospitals on middle rate programs. Under such programs the professional staff and the hospital administration organize in a cooperative relationship. The schedule of professional and hospital charges for persons of moderate means is agreed upon, and all charges are collectable by the hospital. In the socialization of medical practice they recommend group payment supplemented by government subsidy to provide not only medical care but hospital care. This plan would bring the hospitals directly under fed-

eral control and provide for group payment for both medical and hospital service.

Because of the widespread public interest which existed in the system of periodic payment plans for the purchase of hospital care, and, wishing to divorce this plan from the obnoxious plan of socialized medical practice, the American Hospital Association, through its trustees and council, has recommended to its members a periodic payment plan for the purchase of hospital care which bears no relationship to the purchase of professional service from the physician. This plan is apparently sound and meets our ethical requirements. For a fixed fee of say $6.00 to $12.00 per year, paid in advance, the payee is allowed to enter the hospital for ordinary hospital care and for a given length of time, possibly three weeks, which would be more than adequate for the average illness. It proposes that all hospitals in a given area be included in the scheme and that the patient be allowed to select his own hospital. The plan is practical if a considerable group, such as the employees of large factories or business concerns, can be enrolled. The plan rightly excludes all physicians' fees.

The American Hospital Association appreciates several forms of abuse which may enter into the operation of the plan. Because of the difference in morbidity at the different ages, they suggest that the plan is feasible only where large cross-sections of the population can be included. To exclude neurotic patients and chronic invalids, some form of inspection or examination of the participants in the plan is required. To prevent the unnecessary use of the hospital by persons not suffering from any illness, but who desire to use their hospital privilege for vacation or rest, the hospital may require medical certification before admittance.

The association concludes that "the actual development of the plan appropriate to the requirements of a given community will necessitate the consideration of many details which it was thought best to omit from the present plan. In the formation of a plan, those interested will naturally turn to similar agreements already in force in various communities." Again, "the Council urges hospitals to proceed with caution in the development of periodic payment plans." If this plan of periodic payment for the purchase of hospital care can remain divorced from the purchase of medical care on a group basis, it may accomplish its purpose; namely, to enable persons of limited means, who value their independence and do not wish to become objects of charity or to be deprived of needed hospital care, to include hospital costs in their personal or family budget. The lightening of the subscriber's burden which this system provides when hospital care is required makes it easier for the subscriber as a patient to pay his doctor's bills, and to this extent the plan benefits physicians.

The American Hospital Association is to be commended in taking a forward attitude in this problem and in initiating a budgeted plan for the purchase of hospital care for trial among the member hospitals. Since the plan is of their own development, the Council will be able to keep under close observation further developments in this sphere and, from time to time, as necessity may warrant, issue supplementary recommendations to keep the plan within the bounds. They have rightly assumed the leadership in this development.

At all events, the American Hospital Association has assumed leadership and has provided a plan in the solution of the hospital problem, which, if adopted generally, will go far toward removing the all too frequent criticism that hospitalization of the sick is unnecessarily expensive. If put into general use, the plan will offer a highly practical method for the distribution of unforseen hospital costs which so often prove burdensome and embarrassing to persons of limited incomes.

TOO MANY GRADUATE NURSES

The organized nursing associations in an open letter recently posted, are asking the aid of hospital trustees throughout the United States in stemming the increasing stream of nursing school graduates. The letter bears the signatures of the presidents of the American Nurses' Association, the National League of Nursing Education and the National Organization for Public Health Nursing.

"The broken morale of thousands of unemployed nurses has begun to react most unfavorably not on the number of young women applying but on the quality of applicants for enrollment in schools of nursing," says the letter. "This will inevitably increase when economic conditions improve unless the interested groups—hospitals, doctors and nurses—take effective action."

The communication points out that the best thought of all groups concerned will be needed to work out the adjustments in nursing service, which will be required during the next few years. However, certain steps can be taken now to help tide the nurses over the present crisis without adding to the financial embarrassment of the hospitals. It is believed that these steps will also provide a sound basis for future development.

The nurses' suggestions for the betterment of present conditions are as follows:

1. Better selection of students, thus cutting down the cost of carrying large numbers of pro-

bationers for several months only to eliminate from 25 to 50 per cent of them.

2. Employment of ward helpers, maids, orderlies, attendants and secretaries, to take care of a large amount of routine work now done by student nurses.

3. Strengthening of hospital organization by the employment of graduate nurses who are available at relatively low salaries, thus giving the doctors nursing service uninterrupted by class attendance, and the patients the care of more experienced nurses.

4. Tuition fees for students in schools offering a sound and well organized teaching program; also the use of facilities of nearby educational institutions to save part of the cost.

5. Abolishment of allowances and use of the funds for teaching the students.

The letter concludes: "The nurses' problem is due not chiefly to the economic depression but to the weakness of a system of accepting students primarily as workers in the hospitals instead of selecting them as potential graduates for service in their community for the various types of nursing."

Tuberculosis in the Teen Age

Having established a diagnosis of tuberculosis the physician has three distinct responsibilities; first, to the patient; second, to the family; and third, to the community. In order to discharge these responsibilities the physician is required by law to report the case to the health officers. This report is not only for statistical purposes, but also to permit the Health Department to follow the case through and see that it is properly controlled and managed.

If the patient is an indigent, his treatment may be secured through state or county institutions. If he is able to continue as a pay patient, his physician must instruct him not only in the measures necessary for his recovery, but also in those measures necessary for the protection of his family and the community in which he lives. The physician should attempt to determine the source of his infection, since such an inquiry may direct attention to an unrecognized and untreated case of tuberculosis.

To support this program of management, particularly as it affects children under twenty, the spring educational campaign of the national, state and local tuberculosis associations will be directed this year to the question, "From whom did he get it?" and "To whom did he give it?" This movement which extends for a month or more each year is designed to arouse the public to the necessity of taking early precautions against contracting tuberculosis and other preventable diseases. Members of the Iowa State Medical Society may be called upon in many communities to assist in this program, since it is realized that they are best fitted for the task of disseminating authoritative information regarding the various methods of preventing and controlling this disease.

It should be stressed that tuberculosis is not hereditary; it is a communicable disease. In its incipiency the only manifestations may be undue fatigue, loss of weight, chronic cough or the spitting of blood. If the public is educated to know that these mild signs may be indicative of serious disease, and that methods are at hand to confirm or disprove the importance of the tuberculous infection, many early cases will receive medical attention. It is especially important in this age, since young people are prone to "burn the candle at both ends," resulting in nervous and emotional instability during adolescence. Tuberculosis should be especially considered as a possible factor in all boys and girls under twenty years of age who manifest symptoms of asthenia. "The health of any community can be measured by the interest and support of the members of that community in public health measures. 'The health of the child is the strength of the nation.' If that is true, can we afford as a nation to neglect our greatest asset, the health of our children?"

The Foe *of* Youth



"For he was but a youth" . . . yet he slew Goliath . . . And today he can conquer, with Knowledge, his enemy, Tuberculosis, now chief cause of death to young adults

IOWA TUBERCULOSIS ASS'N.
518 Frankel Building
Des Moines, Iowa

MATERNAL MORTALITY AND MOTHER'S DAY

A lay association headed by a carefully chosen medical board under the chairmanship of George W. Kosmak, M.D., editor of the *American Journal of Obstetrics and Gynecology,* has interested itself in a campaign to improve conditions surrounding obstetric delivery. This association has designated the week ending May 14th as a week of public education in the need for adequate medical maternity care.

An editorial which appeared in the *Journal of the American Medical Association*[1] stated, "It is now nearly seventy-five years since Oliver Wendell Holmes in this country and Semmelweis in Europe announced the infectious character and preventability of puerperal septicemia. Yet as nearly as can be determined from our imperfect records, about 15,000 women die annually from conditions related to childbirth. Of these, about 7,000 die from septicemia, known for three quarters of a century to be almost entirely preventable. In 1913, childbirth caused more deaths among women from 15 to 44 years of age than any other one disease except tuberculosis. Of fifteen foreign countries only two show a higher death rate from this cause than the Registration Area of the United States . . . In 1913, the death rate from all diseases of pregnancy and confinement per hundred thousand white population was 15.2, and the rate from puerperal septicemia was 6.9, while the rate per hundred thousand colored population for all diseases of pregnancy was 25.1 and for puerperal septicemia 11.5. Comparing the United States with foreign countries, it is found that out of the sixteen leading countries, the United States stands fourteenth, our death rate in this field being surpassed only by Switzerland and Spain, while Sweden, with a total death rate of 6 per hundred thousand, Norway with 8.1 and Italy with 8.9 per hundred thousand stand at the head of the list. Two causes are suggested: ignorance on the part of the public of the dangers connected with childbirth and of the need of skilled care and proper hygiene to prevent them, and the difficulty of securing proper obstetric care."

Although some authorities state that maternal mortality has improved in this country, apparently this improvement has not been great since we find a continuation of the mortality figures cited above.[2] "If, however, one considers the fact that there are approximately 15,000 maternal deaths annually in this country the figures become impressive . . ." If these figures are even approximately correct, there is apparently considerable room for improvement.

Assuming that the two causes suggested in the editorial quoted above were thoughtfully ascribed, conditions certainly have not changed sufficiently to render them invalid. It would appear, then, that a campaign conducted to dispel ignorance on the part of the public of the dangers connected with childbirth and to impress upon them the need of skilled care and proper hygiene to prevent these dangers, would be timely. Certainly the advocacy of securing proper obstetric care is to be commended. This educational campaign sponsored by the Maternity Center Association will stress these points particularly, and should receive support from both the medical profession and the laity.

Any lay or medical organization desiring material for instructive programs of this type may receive aid by addressing the Maternity Center Association at its New York offices, 1 East 57th Street.

1. Editorial: Maternal mortality in the United States. Jour. Am. Med. Assn., lxviii: 1265 (April) 1917.
2. Obstetrical Education: A report of the sub-committee on obstetric teaching and education of the White House Conference, 1932. Page 5.

IOWA ASSEMBLY INVESTIGATES UNIVERSITY HOSPITAL

Despite the fact that approximately 8,000 patients are admitted annually to the University of Iowa Hospitals, it is alleged that more than 5,000 Iowa residents are on the waiting list for admission at this time. For the purpose of investigating this alleged inadequacy and the alleged prodigality in the spending of some $3,000,000 for the maintenance of this hospital, a committee of nine has recently been appointed; three by the Senate, three by the House of Representatives and three by the Governor. The Senate named Dr. Morris Moore of Walnut, Ed. Hicklin of Wapello and G. W. Patterson of Burt; the House appointed Paul L. Millhone of Clarinda, John Speidel of Washington, and Dr. E. E. Munger of Spencer; and the Governor named Dr. Arthur W. Erskine of Cedar Rapids, Dr. Oliver J. Fay of Des Moines, and Dr. W. A. Sternberg of Mt. Pleasant.

The following preliminary report was submitted to the Governor, the House, and the Senate, Saturday, April first.

The committee appointed pursuant to the provisions of House Joint Resolution No. 7, adopted by the Forty-fifth General Assembly, beg leave to report that immediately upon its appointment it held an organization meeting as a result of which Dr. E. E. Munger was chosen as chairman of the committee and Dr. A. W. Erskine as secretary.

Thereafter the committee held consultations with individual members of the faculty of the State University of Iowa Medical College and with

members of the staff of the State University Hospital. They also conferred with representatives of the State Board of Education and with the President of the State University. They also consulted with the legislative committee of the Iowa State Medical Society and with the Health Commissioner of the State of Iowa, and communicated with the officers of the schools of medicine in Wisconsin, Nebraska, Illinois, Kansas, Colorado, Missouri, Minnesota, Michigan and Indiana. They also communicated with the Secretary of the Association of American Medical Colleges and with the Council on Medical Education and Hospitals of the American Medical Association. They further consulted with numerous individuals of the medical profession, as well as some judges, county attorneys and other officers of the state of Iowa; and the chairman of the committee consulted with the officials of the Brookings Institution in Washington, D. C., and with William D. Cutter, Secretary of the Council on Medical Education and Hospitals of the American Medical Association and with officials of the Rockefeller Foundation in New York City.

The object of the formation of this committee is stated in said House Joint Resolution No. 7 to be as follows:

"The sole purpose of this committee shall be to seek the cause or causes of at least one of Iowa's present misfortunes, viz., unprovided for sick and suffering, and report back to the Forty-fifth General Assembly at the earliest possible moment the result of their consultations and conferences with such recommendations as to the committee seem fit and proper for the deliberate consideration of the Governor, the Senate and the House of Representatives, and for such further action by them as circumstances warrant."

This committee considered to be within the scope of the stated object for its formation (and as particularly set out in the preamble to said resolution) the subject of the existence of a waiting list of indigent patients committed to the State University Hospital under the terms of Chapter 199 of the Code of Iowa, 1931, and has given this subject especial consideration. This waiting list as of March 1, 1933, as disclosed by the records of said State University Hospital, comprised 5,434 persons. Whether this figure is accurate, your committee is unable to determine because there may have been a number of persons committed who since the time of their commitment have died or have been treated and cared for in other ways and at other places, but your committee is convinced that there is a large and needless number of persons upon this waiting list.

It has, therefore, seemed appropriate to your committee that it give consideration to the causes which have brought about this intolerable condition and to suggest certain remedies therefor.

Your committee believes that the law as stated in Chapter 199 of the Code of Iowa, 1931, was enacted for two purposes: First, to furnish adequate clinical material for the purpose of instruction of the number of medical students in the University of Iowa Medical Colleges who would reasonably meet the needs of the State of Iowa in the replacement and provision of trained members of the medical profession and, second, to provide care for indigent citizens of the state. Your committee finds that there are now 420 students enrolled in the Medical College, and for the last five years there have been graduated from this college approximately 95 students each year. Your committee further finds that in the year 1932, being the last year for which there are available data, there were 2,671 medical doctors practicing in Iowa, and in this connection your committee presents a tabulation which it attaches hereto as Exhibit I, showing the number of graduates from the Medical College in each of the years 1928 to 1932, inclusive, and the number of such graduates in practice in the State of Iowa in 1933, and the number of medical doctors practicing in the state in each of said years.

The Association of American Medical Colleges in 1925 appointed a commission on medical education which reported in 1933. This commission among other things found: "Available data indicate that proper medical service can be provided on the basis of one active physician to 1000-1200 persons, depending upon the size and type of the community, the organization of the services and other factors. The present number of physicians probably exceeds the need by at least 25,000 (in the United States) although the number of thoroughly qualified practitioners is and always will remain insufficient." There is now one medical doctor engaged in active practice in the State of Iowa to each 928 people. The average number of doctors dying and removing from the state during the past five years, as shown in Exhibit I, has been 71. Considering, therefore, the number of doctors now engaged in the practice of medicine, which is in excess of the number needed to render proper medical service to the people of the state, and considering the number of replacements normally needed as shown by the experience of the past five years, your committee believes that a student body in the aggregate in the medical school of a number which would make available substantially 75 graduates each year, would fully and amply meet the needs of the State of Iowa insofar as its medical needs are concerned.

If the number of students in the medical college is limited so as to provide only such additions to the medical profession as are needed, the quantity of clinical material for the teaching of the lesser number of students would be correspondingly reduced. The Association of American Medical Colleges through its secretary states: "We do insist, and the Council on Medical Education of the American Medical Association is in complete agreement with the demand, that the school should own or control a general hospital to the extent that it will appoint those members of the staff on whom devolves the teaching function. The requirement calls for a daily average of not less than 200 patients who can be utilized for teaching and of such a variety and character as to permit students to see and study the common types of surgical and medical cases, as well as a fair number in each of the so-called specialties. In the use of this clinical material, bedside and ward clinics should be developed for sections of from 5 to 10 students; and patients in medicine, surgery and the specialties should be assigned to each student under a well supervised clinical clerk system."

That a class of students within reasonable limits can receive more thorough instruction than one without such limits is the opinion of the deans of each of the schools of medicine hereinbefore referred to without exception, and as typical of such opinion, we desire to call to your attention the statement of the Dean of the Medical School of the University of Wisconsin as follows: "We have assumed that this section, by implication, prevents our taking more students in a class for clinical work in a hospital than can be accommodated there with due regard to the welfare of the patients. The medical school and hospital authorities believe that fifty students in a class are as many as can be accepted with due regard to the welfare of the patients, and have accordingly limited the work of the clinical years to that number of students." It is, therefore, the conclusion of your committee, and it so recommends, that the State Board of Education should adopt standards of admittance on a competitive basis to the medical school which would keep the student body of the College of Medicine within such limits as would produce for the last two years thereof an average of approximately 75 members for each of said years and also raise the standard of the type of student which is admitted to and graduated from the College; subject to the same limitations under the existing regulations whereby Iowa citizens are preferred.

During the year ended June 30, 1932, there were 8,719 patients admitted to the State Hospital. The average period of hospitalization for these patients during the same time was 17.7 days. The average number of patients, therefore, at the State Hospital constantly was 492.6. It therefore follows that some other means should be employed in order to care for the indigent sick of the state than the law as contained in Chapter 199, Code of Iowa, 1931, as presently administered.

Under the statutes of this state the duty of caring for indigents primarily rests upon the board of supervisors of each of the counties who are furnished with necessary funds through the levying of general taxes for the poor. Your committee believes, therefore, that Chapter 199, Code of Iowa, 1931, should be amended so as to provide that upon the filing of a complaint, as in that Chapter specified, the same should be referred to the board of supervisors of the county who should, through its overseer of the poor or other designated agent, make an investigation of the indigency of the subject of the complaining. That such subject should be examined by a physician appointed by the court who should receive not in excess of $2.00 for the examination, that if such physician receives a salary or other compensation from the public for his full-time services, no such examination fee shall be paid him, and that upon the report by the physician and the investigating agent of the board of supervisors, a hearing should be had at which the county attorney, the overseer of the poor or other agent of the board of supervisors, the patient or any persons representing him, should be authorized to introduce evidence and be heard. That if upon such hearing the court finds that such person is indigent and is in need of medical care, he shall ascertain from the physician in charge of admissions at the State Hospital, by a long-distance telephone call, reversing the toll to the State Hospital, whether the person can be received as a patient, and if he can, then the court shall enter an order of commitment, and if the physician appointed by the court to examine the subject certifies that an attendant to accompany the patient to the said hospital is necessary, then the court may enter an order appointing such attendant who shall receive not exceeding $2.00 per day for his time and his actual necessary traveling expenses by the most direct route whether by train or automobile.

If, however, the said subject cannot be received in the said hospital, then the court shall enter an order directing the board of supervisors of the county to provide adequate treatment at home or in a hospital.

Since the primary duty of caring for the indigent under the laws of Iowa rests upon the Board of Supervisors of each county, and since provision of funds for such purpose is made through

the levying of general taxation, your committee recommends that said law be further amended so as to provide that the auditor of state shall ascertain the average cost per patient day during each year for all medicine, care and maintenance, and separately for the actual cost of special appliances, instruments and x-ray service used in connection with such treatment, and separately the cost of doctor's examining fees, and separately the cost of the transportation to and from the State Hospital, including the expense of attendants and escorts, of the treatment of all persons committed under the terms of said State Hospital, including the expense of attendants and escorts, of the treatment of all persons committed under the terms of said State Hospital. That the cost as so ascertained of caring for each committed patient other than the cost of transportation and attendants shall be paid one-half by the state and one-half by the county of each patient's legal residence. The cost of transportation and attendants shall be borne by the state. That the superintendent of said State Hospital shall certify to the auditor of state on the first days of January, April, July and October the amount not previously certified by him due the state from the several counties having patients chargeable thereto, and the auditor of state shall thereupon charge the same to the counties so owing. A duplicate certificate shall also be mailed to the auditor of each county having patients chargeable thereto. That the county auditor upon receipt of such certificate shall thereupon enter the same to the credit of the state in his ledger of state accounts, and shall at once issue a notice to the county treasurer directing him to transfer the amount from the poor fund to the general state revenue, which notice shall be filed by the treasurer as his authority for making such transfer, and shall include the amount so transferred in his next remittance of state taxes to the treasurer of state, designating the fund to which it belongs.

That said law be further amended so as to provide that all purchases of materials and supplies by said State Hospital shall be upon competitive bidding and that all expenses incurred by said State Hospital shall be audited by the auditor of state and paid by warrant drawn by him upon the state treasurer. That said law be further amended so as to authorize the said State Hospital to receive patients, care for and treat patients whether over or under 16 years of age who shall be financially able to pay the cost per patient day estimate as hereinbefore provided, but that no such patients shall be received until there is deposited with the hospital authorities a sum equalling such cost for the period of hospitalization estimated by the physician in charge of admissions; but that no such patient shall be received so long as there are indigents needing such care and treatment up to the amount of clinical material as hereinbefore recommended.

That the law be further amended to provide that the cost of any indigent patient to the county shall be certified by the state auditor to the county auditor and preserved by the county auditor and that whenever the same becomes collectable, such sum shall be a debt due the county from the patient or the persons legally responsible for his care, maintenance and support, and it shall be the duty of the board of supervisors and the county attorney to enforce the collection thereof.

Your committee feels that there is no need for a waiting list, with a possible exception of cases of deformity, for admission to the State Hospital. Indeed, it is difficult for your committee to see how patients under the other classifications of said Chapter 199 can be maintained without harm for any considerable period of time upon a waiting list. The suggestions and recommendations heretofore made would provide: First, for adequate clinical material for the needed student body in the state medical college. Second, for the care to that extent of indigent patients partly at state expense and partly at county expense. Third, for the care of all other indigents immediately through other avenues and by resort to the taxes laid under the general laws of the state for such purposes. Your committee further feels that the adoption of the recommendations would tend toward the saving of the taxpayers' money through the lessening of the need of transportation of indigent patients from long distances for an unnecessary purpose.

Your committee further recommends that the Board of Education be directed to continue the economies now in effect at the University Hospital, and also, since the state is now facing a grave emergency, and the standard of living of many of its citizens is far below what they desire and have been accustomed to, and the state, like its citizens, must curtail its expenditures and live within its income in times of financial stress; that the Board of Education be directed to reduce the standards of hospital service to the lowest possible level consistent with the comfort and welfare of the patients.

It is the thought and suggestion of Senator Hicklin and Doctor E. E. Munger that the entire cost of indigent patients at the University Hospital should be borne by the respective counties from which they come inasmuch as those counties are primarily responsible for the care of their own indigent patients.

It is also their opinion and suggestion that no part of this act comes within the proper function

of the court, that the board of supervisors should have the sole responsibility of commitment, based upon the advice of local doctors or health officers; that patients should be committed to the University Hospital so long as they can be received there, but that the local boards of supervisors should at all times have discretion to otherwise care for said patients if they feel that they can do so more economically.

Year	No. Ia. Grads.	No. Ia. Res. Admis.	No. Ia. Res. Grads.	In pract. in Ia. 1933	No. M.D.'s Pract. in Ia.	No. of Deaths	No. Recip. Lics. Cert.	No. Grtd. Lics. by Exams.	No. Grtd. Lics. by Recip.	Renewal fees Iowa and Elsewhere
1928	99	89	89	43	2420	66	6	114	23	$3076.00
1929	86	79	80	25	2666	73	7	92	30	3025.00
1930	97	89	93	15	2742	25	4	105	27	3046.00
1931	92	82	89	not listed	2815	82	7	112	38	3198.00
1932	97	71	91	in dir.	2671	78	6	116	48	3212.00

Des Moines, Iowa.
March 31, 1933.

To His Excellency, The Governor of the State of Iowa and Members of the Forty-fifth General Assembly.

Because of considerable data having a direct bearing on the operation of Iowa's adult indigent law, which data it is not possible to assemble and properly present before the time for adjournment of this session, your committee respectfully requests that it be not discharged, in order that it may present a supplementary or final report under authority of House Joint Resolution No. 7, to the special session to be held in August, 1933, or to the next General Assembly.

University Hospitals
MONTHLY CLINICS
Friday, April 21, 1933

10:00 to 11:00 A. M.
Medicine—Surgical Amphitheater

11:00 to 12:00 A. M.
Obstetrics and Gynecology—Surgical Amphitheater

12:10 P. M.
Luncheon—Doctor's Dining Room

1:00 to 1:30 P. M.
Otolaryngology—Surgical Amphitheater

1:30 to 2:00 P. M.
Ophthalmology—Surgical Amphitheater

2:00 to 3:00 P. M.
Surgery—Surgical Amphitheater

THE OPEN FORUM

PHARMACISTS PASS RESOLUTIONS

The following resolutions were adopted at the recent convention of the Iowa State Pharmaceutical Association:

Whereas, a committee was selected to investigate the costs of medical care; and

Whereas, the information gathered did not dwell on the retail drug business in the proper way as related to the costs of medicine; and

Whereas, the report of the majority favored socialized or state medicine, which would tend to the destruction of all drug business;

Therefore be it resolved, that the Iowa Pharmaceutical Association supports the minority committee report, and will work in conjunction with the Iowa State Medical Society in defeating any phase of socialized or state medicine.

J. W. Slocum, Secretary,
Iowa Pharmaceutical Association.

WARNING!

Dear Dr. Parker:

A high powered salesman visited this town last week, selling to the doctors of Storm Lake, a hocus pocus diagnostic outfit of the Mexican bean class. Dr. E. F. Smith of this city wrote a letter to the Bureau of Investigation of the American Medical Association, and I am attaching herewith Dr. Cramp's reply, the publishing of which might save the doctors of the state some valuable time, and perhaps, some money.

Sincerely yours.
J. H. O'Donoghue, M.D.,
Storm Lake.

Dear Dr. Smith:

We have made no examination of the product put out by the LitPmaHsin Laboratory of Los Angeles, but there seems good reason to believe that it is probably similar to "Litmotone," exploited by a "Dr. Brasted Laboratory," of Anheim, California. Anheim is not far from Los Angeles. The testing solution of litmotone is apparently nothing more wonderful than one of the indicators known to chemists, such as a mixture of methyl red and bromthymol blue. It is apparently of secret composition, and alleged chemical pathology on which its use is predicated has had no confirmation.

My own opinion of both of these products is that they are merely clever pieces of charlatanry. While it is quite true that the indicators of either of these concerns may show the pH of perspiration in the palm of the hand, where it is supposed to be applied, this has no particular meaning, for the pH of the perspiration in the palm of the hand might bear no relation whatever to the hydrogen ion content of the blood.

Very sincerely yours,
Arthur J. Cramp, M.D., Director,
Bureau of Investigation, American Medical Assn.

AMERICAN ASSOCIATION FOR THE STUDY OF GOITER

Headquarters—Peabody Hotel
Memphis, Tennessee
May 15, 16, 17, 1933

Monday, May 15

Hospital Clinics

Diagnostic Clinic

Exophthalmic Goiter in Children—
George E. Beilby, M.D., Albany, New York

The Iodine in the Thyroid Gland—
W. O. Thompson, M.D., Chicago

Morphogeographic and Experimental Studies on the Etiology of Goiter—
C. Alexander Hellwig, M.D., Wichita, Kansas

When Is a Goiter Toxic—
Harold L. Foss, M.D., Danville, Pennsylvania

Hemi-Aplasia of the Thyroid Gland: A review of the Literature and Report of Five Cases—
John deJ. Pemberton, M.D., and
J. M. McCaughan, M.D., Rochester, Minnesota

Studies in the Prevention of Goiter—
William Weston, M.D., Columbia, South Carolina

Thyroid Deficiency a Commonly Unrecognized Disorder—
C. H. Mayo, M.D., Rochester, Minnesota

Tuesday, May 16

Hospital Clinics

Diagnostic Clinic

Diseases of the Thyroid in Children—
Richard B. Cattell, M.D., Boston, Massachusetts

The Rehabilitation of the Toxic Goiter Patient Viewed in a New Light—
Willard Bartlett, M.D., St. Louis, Missouri

Water Balance of Patients with Hyperthyroidism—
Frederick A. Coller, M.D., and
Walter G. Maddock, M.D., Ann Arbor, Michigan

Indications and Technic for Complete Thyroidectomies—
Arthur E. Hertzler, M.D., Halstead, Kansas

Carbohydrate Metabolism in Its Relation to Hyperthyroidism: A Continuation Study—
Charles H. Frazier, M.D., Philadelphia, Pennsylvania

The Life Cycle of the Thyroid Cell and Its Relation to Goiter—
Benjamin Markowitz, M.D., Bloomington, Illinois

Advantages and Technique of Preliminary Hemostasis in Thyroidectomy—
Martin Nordland, M.D., Minneapolis, Minnesota

Hyperthyroidism Complicating Pregnancy—
James A. Lehman, M.D., Philadelphia, Pennsylvania

Wednesday, May 17

Hospital Clinics

Diagnostic Clinic

The Use of Digitalis Preparations in Thyrotoxicosis—
Shelby W. Wishart, M.D., Evansville, Indiana

The Thyrotoxic Goiter Problem and the Autonomic—
Andre Crotti, M.D., Columbus, Ohio

Further Observations on Parathyroid Protection—
H. H. Searls, M.D., and
Wallace I. Terry, M.D., San Francisco, California

THE O'BRIEN COUNTY INTER-PROFESSIONAL ASSOCIATION

A unique organization has recently been completed in O'Brien county called the O'Brien County Inter-Professional Association. The membership is composed of fifty-five dentists, druggists, veterinarians, nurses, and doctors of medicine. The purpose of the new organization is to protect the public health from jeopardy at the hands of unskilled, poorly trained and otherwise incompetent people, and to concern itself in all public health problems, including vaccination for contagious diseases, prevention and control of epidemics, testing of milk cattle herds, and other important matters directly bearing upon public health. The organization will meet quarterly.

AN INVITATION

The faculty of Creighton University Medical School, Omaha, Nebraska, announces that a three day cancer conference will be conducted by Dr. Joseph Colt Bloodgood and Dr. Charles F. Geschickter of the Surgical Pathologic Laboratory of Johns Hopkins Medical School and Hospital, on April 19, 20 and 21 at the Creighton Memorial St. Joseph's Hospital. They will be assisted and furnished with clinical material by the staff of Creighton University Medical School.

New growths in all their phases, the clinical, the radiologic, the gross and the microscopic will be presented with an attempt to follow the order of subjects as outlined on the program below:

Wednesday, April 19

9:00-12:00 A. M. For oral surgeons and others interested in jaw, teeth and oral cavity.
2:00-5:00 P. M. For orthopedic surgeons and others interested in diseases of bones and joints.
Evening Meeting. Bone dystrophies—
Dr. Geschickter

Thursday, April 20

9:00-12:00 A. M. Tumors of the breast.
2:00-5:00 P. M. Tumors of uterus and ovary.
Evening Meeting. For Nurses, Dentists and Physicians.
What Every Physician Should Know About Cancer—
Dr. Bloodgood

Friday, April 21

9:00-12:00 A. M. Tumors of skin and appendages—lymph glands. Tumors of the genito-urinary system: kidneys, ureters, bladder and prostate.
2:00-5:00 P. M. Tumors of gastro-intestinal tract. Tumors of the chest.

For further information address Dr. James F. Kelly, St. Joseph's Hospital, Omaha, Nebraska.

THE ECONOMIC LOSS FROM UPPER RESPIRATORY INFECTIONS

On the basis of an extensive survey the Committee on Costs of Medical Care estimates that the nation's 36,000,000 wage earners lose 250,000,000 days annually on account of illness, or an average of almost seven days each, and that its 24,000,000 school children lose 170,000,000 days per school year, slightly more than seven school days per child. Colds, bronchial conditions, influenza and grippe are the most serious causes of disability among wage earners and school children, from the standpoint both of frequency and of days lost.

SPEAKERS BUREAU ACTIVITIES

MEETINGS OF MERIT

The Speakers Bureau is pleased to call attention to the splendid programs of the Dickinson County Medical Society. Below is given an outline of their programs from February through July:

February 23

Anatomy and Physiology of the Heart—C. S. Shultz, M.D., Spirit Lake. (Illustrated.)

Acute Pericarditis—C. G. Nicholson, M.D., Spirit Lake.

March 30

Myocardial Disturbances—Don F. Rodewig, M.D., Spirit Lake.

Endocarditis—P. G. Grimm, M.D., Spirit Lake.

April 27

Auricular Fibrillation—Ruth F. Wolcott, M.D., Spirit Lake.

Arrhthymias—E. J. Johnson, M.D., Milford.

May 25

Arteriosclerosis and Hypertension—F. J. Smith, M.D., Milford.

Cardiovascular Renal Disease—C. M. Coldren, M.D., Milford.

June 29

Coronary Thrombosis—Q. C. Fuller, M.D., Milford.

Aortic Valvular Lesions—E. R. Leonard, M.D., Lake Park.

July 27

Mitral Valvular Lesions—A. H. Schooley, M.D., Terril.

Treatment of Decompensation—W. E. Bullock, M.D., Lake Park.

Essential Hypertension—F. J. Smith, M.D., Milford.

This is a schedule of which the members of the Dickinson County Medical Society may well be proud. Each of the series of lectures is presented by one of their local men. The entire series is well planned and organized, forming a comprehensive study of cardiac conditions. A schedule of this kind is not only interesting but of infinite value to the members of this county. Upon the completion of these programs, they will indeed have a store of knowledge about the heart.

The first medical society was formed in Breslau, Germany, in 1637. The constitution of this most ancient body declares that it was instituted for the express purpose of promoting medical training and scientific advancement. In presenting programs of this nature, the Dickinson County Medical Society is fulfilling this twofold function of a medical organization.

WINNESHIEK COUNTY

Radio Program

The Winneshiek County Medical Society is planning to broadcast weekly health talks over the radio station at Decorah. The Bureau congratulates this society on their assuming this responsibility. It is gratifying to see the members of the medical profession awaken to the realization that it is they who should educate the public in this way. It is also encouraging to note the willingness with which those who are in charge of the radio stations cooperate in this great educational project. They realize the value and the popularity of health talks and are turning to the doctors as those best qualified to dispense such information. Usually when a medical society has a period for broadcasting health talks the radio station will permit no one, not approved by the medical society, to broadcast material on health matters.

The radio is one of the most important factors in present day education. If incorrect information is disseminated through it, however, the radio may work just as strongly against the public health as it may improve it by scientific information. It is time that the truth about health matters be given the public and the medical practitioner is the one whose training fits him for such a responsibility.

RADIO TALKS

WSUI—Thursdays, 8:00 p. m.

WOI—Fridays, 4:30 p. m.

April 7—Sleep and Growth—Jack V. Treynor, M.D.

April 14—Boils and Carbuncles—F. W. Fordyce, M.D.

April 21—A New War Against Tuberculosis—William Spear, M.D.

April 28—Tired Feet—Douglas N. Gibson, M.D.

POSTGRADUATE REPORT

Approximately 210 members of the Iowa State Medical Society are taking postgraduate work sponsored by the Speakers Bureau in three localities in the state. About 120 are enrolled in the course on "Fundamentals in Medicine" at Waterloo; 45 in the course on "Neurology and Psychiatry" at Ames; and 45 in the course on "Diseases of Metabolism and Endocrinology" at Mason City.

This type of work is more popular each year. In 1929-30 there were about 90 physicians taking work in two centers; in 1930-31, 180 in five centers; in 1931-32, 170 in four centers; in the spring of 1932, 40 in one center; in the fall of 1932, 150 in four centers; and in the spring of 1933, 210 in three centers. This makes a total of 840 registrants in the postgraduate courses of the Speakers Bureau. Some of these are "repeaters", of course, but these figures roughly indicate the high percentage of the membership of the Iowa State Medical Society who are actively interested in this means of scientific advancement.

OFFICIAL CALL

To the Officers and Delegates for the 1933 Meeting of the House of Delegates

The first meeting of the House of Delegates at the 1933 session of the Iowa State Medical Society will be held promptly at 3:30 p. m., Wednesday, May 10, in the Oak Room of the Hotel Fort Des Moines, in Des Moines.

For the past three years this first meeting of the delegates has been held the day before the regular session but the House of Delegates voted to convene this year on the same day that the regular session opened.

The registration desk, located on the mezzanine floor of the Hotel Fort Des Moines, will be open at 7:30 a. m. on Wednesday. Registration is necessary for all officers and delegates, and should be made prior to the opening of the meeting.

Many important matters will be considered, among them the proposed amendment to the constitution, the reports of the various officers of the state society, and the committee reports, especially that of the Committee on Public Policy and Legislation.

All members of the society will be admitted to the meetings of the House of Delegates but only the certified delegates, or their alternates, will have a part in the transactions.

W. N. Brown

President.

SOCIETY PROCEEDINGS

Black Hawk County Medical Society

Tuesday, March 14, members of the Waterloo Medical Society, Cedar Falls Medical Society and Black Hawk County Society, united to form one organization which will be known as the Black Hawk County Medical Society. Julius H. Hess, M.D., head of the department of pediatrics of the University of Illinois, Chicago, was the speaker at the first regular meeting, held in Waterloo, Tuesday, March 21. Dr. Hess spoke on Tuberculosis in Children.

Cass County

Members of the Cass County Medical Society met in Atlantic, Tuesday, March 21, for their regular meeting, and W. W. Kitson, M.D., of Atlantic, presented a paper on Coronary Thrombosis.

Cerro Gordo County

The Cerro Gordo County Medical Society met in Mason City, Tuesday, March 21, and the following program was presented by society members: An Interesting Case of Diabetes Insipidus, A. H. Chilson, M.D., Plymouth; Obstetrics in the Home, E. P. Kennedy, M.D., Swaledale; and An Unusual Case of Cervical Lymphadenitis, A. B. Phillips, M.D., Clear Lake.

Clinton County

Robert W. Keeton, M.D., of the University of Illinois, gave an address before the Clinton County Medical Society, at its regular meeting, Thursday, March 2, speaking on Recent Advances in Nutrition. His talk dealt chiefly with the quantitative rather than the qualitative treatments of foods in various diseases. At the business meeting, the society adopted a new constitution, patterned after the one recommended by the state society.

Ralph F. Luse, M.D., Secretary.

Crawford County

The scientific program given at the March 21st meeting of the Crawford County Medical Society consisted of: Malpositions—Their Pathology and Allied Complications, W. H. Taylor, M.D., associate professor of gynecology and obstetrics, University of Nebraska College of Medicine, Omaha; Chronic Cervicitis, M. E. Grier, M.D., associate professor of gynecology and obstetrics, Creighton University School of Medicine, Omaha; and Laboratory Procedures and Gross Pathology Relating to Gynecology, Allen C. Starry, M.D., Sioux City. All papers were illustrated with lantern slides.

J. James Duffy, M.D., Secretary.

Davis County

The Davis County Medical Society met Monday, March 6, in the office of Dr. C. D. Fenton, at Bloomfield. E. C. McClurg, D.D.S., of Bloomfield, discussed some of the lesions of the mouth; G. W. Gilfillan, M.D., of Pulaski, presented a case report; and Charles B. Taylor, M.D., of Ottumwa, president elect of the Iowa State Medical Society, discussed at length the Final Report of the Committee on the Costs of Medical Care.

H. C. Young, M.D., Secretary.

Dubuque County

The following interesting program was presented at the monthly meeting of the Dubuque County Medical Society, held Tuesday, March 14: Intestinal Obstructions, William R. Cubbins, M.D., Northwestern University School of Medicine, Chicago; Statistical Report on Cases of Intestinal Obstruction at Cook County Hospital, Chicago, Amos Fey, M.D., Galesburg, Illinois; and Fractures of the Patella, James Callahan, M.D., Northwestern University School of Medicine, Chicago. Preceding the scientific program a dinner was served at the Elks' Club in honor of the guest speakers. Both the dinner and the meeting were well attended.

Roy I. Theisen, M.D., Secretary.

Floyd County

Tuesday, February 28, the monthly scientific meeting of the Floyd County Medical Society was held in Charles City. An interesting paper on Gonorrhea in the Female was presented by J. B. Miner, Sr., M.D., of Charles City, and Ray Fox, M.D., also of Charles City, gave a paper on Practical Points in Diagnosis and Preoperative Care in Surgery. Both papers were generally discussed.

J. B. Miner, Jr., M.D., Secretary.

Franklin County Annual Meeting

The annual meeting of the Franklin County Medical Society was held recently in Hampton, and the following officers were chosen for this year: Dr. W. R. Arthur, president; Dr. H. H. Johnston, vice president; Dr. W. J. Aagesen, secretary and treasurer; Dr. W. K. Long, delegate; and Dr. Arthur, alternate delegate. All officers are of Hampton.

Hardin County

Harold Swanberg, M.D., of Quincy, Illinois, editor of *The Radiological Review*, has been invited to address the Hardin County Medical Society, at Eldora, Wednesday, April 5, on the subject, Radium Therapy in General Practice.

Harrison County Annual Meeting

Dr. F. X. Tamisiea of Missouri Valley was elected to head the Harrison County Medical Society for this

year, at a meeting held in Logan, Friday, March 3. Other officers elected are: Dr. A. C. Bergstrom of Missouri Valley, vice president; Dr. F. H. Hanson of Magnolia, secretary and treasurer; Dr. Charles S. Kennedy of Logan, delegate, and Dr. S. M. Clark of Woodbine, alternate delegate.

F. H. Hanson, M.D., Secretary.

Lee County

Thursday, March 16, members of the Lee County Medical Society met at the Y. W. C. A. for a six-thirty dinner, after which the following symposium on diseases of the kidney was presented: Anatomy and Physiology of the Kidney, A. A. Johnstone, M.D., Keokuk; The Kidney as Affected in Childhood and Early Adult Life, B. J. Dierker, M.D., Fort Madison; The Kidney as Affected in Middle and Late Life, F. Blinn Dorsey, Jr., M.D., Keokuk. Daniel J. Glomset, M.D., of Des Moines summarized the symposium and pointed out the pathology of the various forms of nephritis, suggesting rational lines of therapy in each case. Dr. John H. Peck of Des Moines was a guest of the society.

Harold F. Noble, M.D., Secretary.

Linn County

Harold Hays, M.D., of New York City, first president of that state's League for the Hard of Hearing, as well as a leader of that work in this entire country, was the principal speaker at the Linn County Medical Society meeting held in Cedar Rapids, Thursday, March 7. Dr. Hays' subject was The Preventive and Alleviating Methods in the Treatment of Deafness, and his paper was discussed by D. M. Lierle, M.D., of Iowa City; Gordon F. Harkness, M.D., of Davenport; William W. Pearson, M.D., of Des Moines; George Pearson, M.D., of Burlington; George C. Albright, M.D., of Iowa City, and T. U. McManus, M.D., of Waterloo. B. L. Knight, M.D., of Cedar Rapids, read a paper on The Gallbladder in Office Practice, which was discussed by H. E. Pfeiffer, M.D., also of Cedar Rapids.

Muscatine County

The Muscatine County Medical Society held a dinner meeting, Monday, March 27, to which the Woman's Auxiliary was invited. After the dinner, the following papers were read and discussed: Etiology of Headache, R. R. Goad, M.D., of Muscatine, and Ureteral Stricture, G. A. Sywassink, M.D., of Muscatine.

C. P. Phillips, M.D., Secretary.

Polk County

The regular meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held in the South Ballroom of the Hotel Fort Des Moines, Tuesday evening, March 28. Approximately 120 members and guests were in attendance.

The meeting was called to order by President Parker promptly at seven-thirty. Julius S. Weingart, M.D., presented an unusual pathologic specimen and discussed the case briefly. This clinical presentation is in accordance with the recommendation of the program committee to have presented before the society at the regular meetings, rare and unusual pathologic specimens and x-ray findings. Elmer E. Kottke, M.D., presented an instructive paper entitled, Streptococcic Septicemia following Bacillus Welchii Infection Treated by Nonspecific Immuno Blood Transfusion. The paper was well illustrated with slides of charts depicting the physical history of a recent case of amputation following a gunshot wound. The paper was discussed by Oliver J. Fay, M.D., Julius S. Weingart, M.D., Fred Moore, M.D., and Daniel J. Glomset, M.D. Lawrence D. Smith, M.D., and Abraham G. Fleischman, M.D., collaborated in the presentation of papers on the consideration of sterility. Dr. Smith spoke on Consideration of Sterility in the Female and Dr. Fleischman spoke on Consideration of Sterility in the Male. Both lectures were augmented by illustrative slides. Henry E. Kleinberg, M.D., spoke briefly in commenting on the papers.

The bicentennial anniversary of the birth of Joseph Priestley, discoverer of oxygen and paternal ancestor of three generations of Priestleys who have practiced medicine in Des Moines, was commemorated by Walter L. Bierring, M.D., in a short historical sketch and review of the life and works of the man.

The meeting was concluded by motion pictures entitled, Across America in Twenty-seven Hours, shown by Mr. E. B. Butler, Traffic Representative of the United Air Lines. A number of men remained for the social hour of cards.

L. K. Meredith, M.D., Secretary.

Poweshiek County

Tuesday, April 4, the Poweshiek County Medical Society met at the Community Hospital in Grinnell for a scientific meeting. The society was addressed by S. D. Porter, M.D., pathologist of the hospital, on subjects relating to his specialty. Specimens were shown of the work done in the hospital, which were intensely interesting.

E. E. Harris, M.D., Secretary.

Sac County

Pending and proposed medical legislation was discussed at the meeting of the Sac County Medical Society held in Sac City, Friday, March 3, with Dr. James E. Reeder of Sioux City, councilor for the fourth district, and Senator I. G. Chrystal of Coon Rapids, present as guests of the society.

J. R. Dewey, M.D., Secretary.

Scott County

The Scott County Medical Society met in regular session, Tuesday, March 7, in Davenport, and after a six o'clock dinner, Fred M. Smith, M.D., of Iowa City, spoke on The Significance of Cardiac Pain.

Taylor County

Members of the Taylor County Medical Society met Tuesday, March 14, at the home of Dr. J. T. Maloy of Bedford, and the following scientific papers

were read: Diagnosis and Treatment of the Irritable Colon, Clarence L. Bain, M.D., of Corning; The Treatment of Sciatica, P. E. Newport, M.D., of Clarinda.

Washington County

Frank J. Rohner, M.D., of Iowa City, was the speaker of the evening at the Washington County Medical Society meeting held Tuesday, March 7, taking as his subject, The Anemias.

W. S. Kyle, M.D., Secretary.

Upper Des Moines Medical Society

The following program was presented before the winter meeting of the Upper Des Moines Medical Society, held at the Gardston Hotel in Estherville, March 2: The Management of Labor by the General Practitioner, T. H. Johnston, M.D., of Spencer; Medical Economics, Smith C. Kirkegaard, M.D., of Ringsted; A Round Table Discussion of Favorite Therapeutic Measures, members of the Palo Alto County Medical Society; Quinine and Bismuth as Therapeutic Remedies, Frank Given, M.D., of West Bend; The Treatment of Eczema, T. Th. Naae, M.D., of Graettinger; Insulin in the Treatment of Diabetes, Paul O. Nelson, M.D., of Ayrshire; The Use of Vaseline Pack in the Treatment of Osteomyelitis, H. L. Brereton, M.D., of Emmetsburg; Traumatic Injuries to the Eye, with presentation of two case reports, Andrew I. Reed, M.D., of Estherville. Following the afternoon program, a six o'clock dinner was served. Ruth F. Wolcott, M.D., of Spirit Lake, spoke on her experiences in the practice of medicine in China, and Dr. Winkler of Sibley, and Dr. Brock of Sheldon, gave short talks. The following officers were elected: Dr. J. M. Sokol, of Spencer, president; Dr. J. B. Knipe, of Armstrong, vice president; Dr. George H. Keeney of Mallard, secretary and treasurer. The summer meeting will be held at the Iowa Great Lakes in June.

George H. Keeney, M.D., Secretary.

AUXILIARY NEWS

New Organization for Howard County

The following officers were elected to serve the Woman's Auxiliary to the Howard County Medical Society at its organizational meeting held in Cresco, Monday, March 6 : Miss Gertrude Kessel, president; Mrs. C. F. Snopek, vice president; Mrs. L. W. Clark, secretary and treasurer.

Webster County

The Woman's Auxiliary to the Webster County Medical Society held its second meeting, Monday, March 6, in Fort Dodge. Following the business session, Mrs. E. M. Kersten presented a paper on State Medicine.

Wapello County

The newly organized Woman's Auxiliary to the Wapello County Medical Society sponsored a joint dinner meeting with the County Medical Society Tuesday, March 7, at the Village Tea Room. An unusually large number of members attended. Following the business meeting of both organizations, an enjoyable evening was spent at bridge. Honors were carried away by Mrs. L. A. Taylor and Dr. Chas. B. Taylor, Mrs. F. L. Nelson and Dr. F. L. Nelson.

Mrs. R. O. Hughes, Secretary.

Physicians' Wives in Winneshiek County Organize Auxiliary

Mrs. F. A. Hennessy of Calmar has been selected to head the Woman's Auxiliary to the Winneshiek County Medical Society, throughout this year. The auxiliary was organized at a meeting held in Decorah, Tuesday, March 21, and other officers are: Mrs. A. F. Fritchen of Decorah, vice president; and Mrs. L. C. Kuhn of Decorah, secretary and treasurer.

Woodbury County

The Sioux Meddames held their annual business meeting at the home of Mrs. James E. Reeder, Wednesday, March 15. The following officers were elected for the coming year: Mrs. R. W. Perkins, president; Mrs. R. F. Bellaire, vice president; Mrs. Robert Knott, secretary; and Mrs. H. M. McCuistion, treasurer.

After the business meeting the social committee arranged a picture gallery consisting of very early and interesting pictures of the members. An effort was made to guess the identity of the subjects, but some of them proved rather difficult. At the close of the meeting a delightful tea was served by the hostess and her committee.

Eleventh Annual Meeting of Woman's Auxiliary to the American Medical Association

The Woman's Auxiliary to the American Medical Association will hold its Eleventh Annual meeting at Milwaukee, June 12-16, 1933. Headquarters will be Hotel Pfister, Milwaukee.

Preliminary Program

Monday, June 12

12:30 P. M.—Luncheon at College Woman's Club in honor of past presidents, followed by National Board meeting and visit to American Medical Association Exhibits at Auditorium. Tickets $1.00.

7:00 p. m.—Dinner for National Board, delegates, and wives of officers and delegates of the American Medical Association at Woman's Club of Wisconsin. Musical program furnished by artist members of Auxiliary to Medical Society of Milwaukee county. Tickets $1.25.

Tuesday, June 13

9:00 A. M.—General meeting, Roof Room, Hotel Pfister, Mrs. James F. Percy, presiding.

12:30 P. M.—Luncheon and bridge at the Wisconsin Club. Tickets $1.25.

2:00 P. M.—*Attractions available for those not wishing to play bridge are Layton Art Gallery, Milwaukee Art Institute, Milwaukee Museum, Curative

Work Shop and Vocational School, or a bus trip to county institutions, Milwaukee Children's Hospital Convalescent Home, and Washington Park Zoo.

8:00 P. M.—General meeting of American Medical Association.

10:00 P. M.—Informal dance at Wisconsin Club. Courtesy of State Medical Society of Wisconsin. Hostesses, Woman's Auxiliary to the State Medical Society of Wisconsin.

Wednesday, June 14

9:00 A. M.—General meeting, Roof Room, Hotel Pfister, Mrs. James F. Percy, presiding.

12:30 P. M.—Auxiliary luncheon, Fern Room, Hotel Pfister. Guests and speakers from the American Medical Association. Musical program. Tickets $1.00.

4:00 P. M.—*Teas in private residences.

8:30 P. M.—Light opera. Tickets $1.00.

Thursday, June 15

9:00 A. M.—General meeting, Roof Room, Hotel Pfister, Mrs. James Blake, presiding.

12:00 M.—Trip to Oconomowoc Lake district. Luncheon 12:30 p. m., Carnation Milk Plant, Oconomowoc, Wis.; transportation and luncheon courtesy of Carnation Milk Company, or

12:30 P. M.—Buffet luncheon, Crystal Room, Hotel Pfister. Tickets 75 cents.

2:00 P. M.—*Sight seeing tour of Milwaukee.

6:30 P. M.—"Bring Your Husband" dinner, Fern Room, Hotel Pfister. International-House-Cabaret. Tickets $1.50.

9:00 P. M.—President's reception and ball, Schroeder Hotel. Hosts, the American Medical Association.

Friday, June 16

10:00 A. M.—Golf tournament.

All trips start from Hotel Pfister.

*Bus transportation to be paid by individual.

Mrs. Rock Sleyster, General Chairman,
Wauwatosa, Wisconsin.

INTERESTING NEWS

In Brief

The passage of the hospital bill by the Iowa State Legislature enables cities of between 5,000 and 6,000 population to borrow money from the Reconstruction Finance Corporation, guaranteeing repayment from the profits of the municipal light plant for the purpose of hospital construction. A special election will be held in Spencer within the next few weeks to determine the employment of this law in the construction of a new city hospital for Spencer.

Claiming respectability on the basis of the recent report of the Committee on the Costs of Medical Care, a Chicago organization, occupying four floors of a down town office building, flagrantly violate all principles of medical ethics in a full page newspaper advertisement in which they purport to diagnose and treat all medical ailments at five and ten cent store rates.

The Charles Mickle Fellowship at the University of Toronto awarded each year for the most outstanding contribution in the advancement of medical art or science during the preceding ten years has been granted to Gaston Leon Ramon of the Pasteur Institute in France.

In keeping with the times the nurses of the first district of the Iowa Association of Registered Nurses have adopted a new schedule which amounts to approximately 15 per cent reduction in the amount paid to graduate nurses for special duty service.

Following a study of 20,000 school children in Sioux City it is stated that Havelock Ellis' contention that children born to elderly parents are more intelligent than other children has been confirmed. The several explanations of this observation all appear unsatisfactory.

In spite of the reduction of $500,000 in the budget allowed the city health department, Chicago had a lower infant death rate and general death rate in 1932 than in any other year of its history.

A Johns Hopkins University psychologist states that technocracy gained its hold upon the popular fancy partly because of the sound of the word and the manner in which it was pronounced.

Observations made at the Mayo Clinic would indicate that a combined therapy employing ephedrine and glycine gives highly satisfactory results in the treatment of myasthenia gravis.

Dr. William L. Richardson, one-time dean (1893-1907) of Harvard Medical School, bequeathed $100,000 to this school for the endowment of a professorship of obstetrics.

More than $2,000 has been pledged by 120 members of the Upper Des Moines Hospital Association for the purpose of operating an open hospital in Estherville.

About 120,000 pounds has recently been made available to several British institutions for research in cancer and tuberculosis.

Yale University is now constructing a new thermohygienic laboratory in connection with their school of medicine.

A recent study indicates that one person in three suffer from some degree of deafness in England and Wales.

Epidemic conjunctivitis has recently been shown to be caused by the common gnat.

PERSONAL MENTION

Dr. R. J. Stephen, who has been associated with Dr. A. B. Fair of Ottumwa for the past several months, is now located at 726 Merchants National Bank Building, Cedar Rapids, and has limited his practice to diseases of the eye, ear, nose and throat.

Dr. J. E. Brinkman of Waterloo, was elected president of the Waterloo Chamber of Commerce, at the annual meeting of that organization, held March 2.

Dr. Isaac Sternhill of Council Bluffs, delivered a paper on "Mental Hygiene," at a clinic conducted by the Nebraska-Iowa Pediatric Society, Thursday, March 9, in Omaha.

Dr. Lorenz Westenberger, formerly of Hampton, has located in Fort Dodge, where he will continue in general practice.

Dr. Tom B. Throckmorton of Des Moines, presented the annual Epsilon Sigma address at Simpson College in Indianola, Tuesday, March 21, taking as his subject, "The Personality of Man."

Dr. Andrew H. Woods of Iowa City, addressed the Business and Professional Women's Club of Cedar Rapids, Tuesday, March 21, on the subject of "Nervous Invalidism as an Escape from Reality."

Dr. Harold Schoon, formerly with the Denver General Hospital of Denver, Colorado, has located in Sibley, where he will conduct a general practice, in addition to serving as the director of the Sibley Hospital Laboratory.

Dr. Robert L. Parker of Des Moines, gave an address to the student body of the Des Moines College of Pharmacy, Thursday, March 2, on "The Relationship of the Practice of Pharmacy to the Medical Profession.

Dr. Roscoe D. Smith of Clarinda, has been appointed superintendent of the State Hospital for the Insane at Clarinda, to fill the vacancy created by the death of Dr. Max E. Witte, January 29. Dr. Smith has been connected with the hospital since 1910, being appointed assistant superintendent in 1918.

DEATH NOTICES

Allen, Manning L., of Tama, aged seventy, died March 11, after a prolonged illness. He was graduated in 1893 from the University of Illinois College of Medicine and at the time of his death was a member of the Tama County Medical Society.

Caldwell, James W., of Steamboat Rock, aged eighty, died March 14, after having been ill for some time. He was graduated in 1876 from the Cincinnati College of Medicine and Surgery, and at the time of his death was a member of the Hardin County Medical Society.

Haller, Julius Theodore, of Davenport, aged fifty-five, died February 28, as the result of burns received in an automobile accident. He was graduated in 1905 from Johns Hopkins University School of Medicine, and at the time of his death was a member of the Scott County Medical Society.

Rohrig, John George, of Davenport, aged fifty, died March 25, after an illnes of two weeks' duration. He was graduated in 1909 from the State University of Iowa College of Medicine and at the time of his death was a member of the Scott County Medical Society.

Tilden, Charles George, of Kalona, aged sixty-one, died March 17, in a Rochester, Minnesota, Hospital, where he had been operated upon for malignancy of the colon. He was graduated in 1899 from the Marion-Sims College of Medicine, St. Louis, and in 1900 from the Drake Medical College, Des Moines. At the time of his death he was a member of the Washington County Medical Society. Dr. Tilden located for practice in Riverside, and in 1907 was appointed hospital physician at the State College at Ames, holding that position for fourteen years. Since 1921, he had practiced in Kalona; always a faithful, capable physician.

C. A. Boice, M.D.,
E. E. Stutsman, M.D.,
Committee.

ORAL THERAPY IN CONGENITAL SYPHILIS

The use of stovarsol in congenital syphilis by pediatricians abroad induced Maxwell and Glaser to investigate the value of the therapy. The results achieved in ten cases are reported in full in the Am. J. Dis. Child. 43:1461-1489, June, 1932.

In four cases the Wassermann reactions were negative when treatment was begun but as the parents were 4+ treatment was not delayed. These cases had remained negative over a period of thirteen months when reported. The other six cases had positive Wassermann reactions. Three were reversed after the first course of treatment, two at the end of the first rest period, and the other at the end of the second course of stovarsol therapy. The results in these infants, all under one year of age when treatment was begun, are encouraging. Children over one year of age did not respond so readily.

Other features of stovarsol therapy in congenital syphilis in infants and children as reported are: the remedy is administered by mouth, and the patients generally show improvement in appetite, general vigor and energy.

The authors believe that stovarsol has a definite place in the treatment for congenital syphilis. Administration must always be under the direction of the physician as toxic symptoms may appear. In the majority of cases these symptoms are mild in character but occasionally they may be severe.

Stovarsol is a pentavalent arsenic preparation allied to arsphenamine in its chemical constitution. It is manufactured in this country by Messrs. Merck & Co., Inc., of Rahway, N. J.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. WILLIAM JEPSON, Sioux City
DR. ARTHUR D. WOODS, State Center
DR. FRANK M. FULLER, Keokuk
DR. WALTER L. BIERRING, Des Moines
DR. JOHN T. McCLINTOCK, Iowa City

The History of Medicine in Lucas County

TOM MORFORD THROCKMORTON, A.M., M.D.,
Chariton
TOM BENTLEY THROCKMORTON, B.Sc., M.D.,
Des Moines

FOREWORD

Several years ago I persuaded my father to undertake the collection of data pertaining to the early practice of medicine in Lucas County. Already the fleeting years and the ruthless hand of the Grim Reaper had removed the pioneer physicians who had faced so bravely the dangers and hardships incident to the settling of the unbroken prairie soil of that county. Not only had these pioneers long since passed to their eternal rest but many others, who had followed in their wake, likewise were gone and, in many instances, forgotten.

The task, once begun, was by no means an easy one. Relatives and friends in many instances were no longer at hand to furnish the much needed information concerning these men. Records, once available, from which one could glean the much desired facts, were no longer in existence. However, I felt, in spite of these odds, that something should be done to preserve for posterity such facts as could be gathered together concerning the physicians who, at one time or another, had practiced in the county. As the oldest living physician in the county and the last of the old school of practitioners, I believed that my father was best fitted to obtain the data and to interpolate not only his early recollections of the profession, but the growth of the profession as well, during the fifty-six years that have elapsed since he began the practice of medicine in Lucas county.

I am aware that there may be some imperfections not only in the data as obtained, but in its compilation as well. When one realizes that the first physician located in the county in 1848, now over eighty-five years ago, and that since then between one and two hundred other physicians have practiced within its borders, an accurate record is hardly to be expected at this late day. It should not be forgotten, in this connection, that for many years the only qualification, either scientific or legal, that was needed by anyone who wished to practice the healing art, was the hanging out of one's shingle, which announced to the world that a physician was at hand who was ready and willing to care for the sick and afflicted, day or night. No preliminary education was required; no college degree was needed; no attendance on medical lectures or even the possession of a diploma showing that such a course of lectures had been pursued, was mandatory in an early day as a pre-requisite for the practice of medicine. Not even the recording of physicians' names in either county or state was necessary.

Under such circumstances it is little wonder that the task of writing the history of medicine in Lucas County, when once undertaken, assumed a magnitude far beyond the realization of the authors. However, upon the whole, I feel quite confident that the record, as will be set forth from time to time in the JOURNAL, will be, for all intents and purposes, a correct pen picture of those faithful colleagues who did their share in carrying on and keeping aloft the high standard of medicine as it was understood and practiced in the county since 1848. Certain it is that no physician of any prominence, whatsoever, has been overlooked in the endeavor to bring together these facts which treat of the history of medicine in Lucas County.

SETTLEMENT OF LUCAS COUNTY

The history of medicine in Lucas County is almost coincident with the change of territorial Iowa to that of statehood. In 1838, President Van Buren appointed Robert Lucas, an Ex-Governor

of Ohio, as the first territorial governor of Iowa. Accordingly, Governor Lucas came to Burlington and there established the capital of the territory. Here he opened a federal office for the purpose of carrying on the work of granting land claims to the newcomers and of attending to other matters pertaining to governmental affairs. The president's appointment of the territorial governor proved to be a wise selection, indeed. His handling of the governmental interests in this new and untried country met with approbation on every hand. It, therefore, occasioned no surprise, when the survey of the territory having resulted in the laying out of ninety-nine counties, that one of this number should be named after Iowa's first territorial governor. The first act in the organization of Lucas County was that of the last territorial legislature of Iowa when it passed the act, January 13, 1846, to "establish a new county, which shall be named Lucas, and define its boundaries." At the second session of the General Assembly of the state an act to organize Lucas County was approved January 15, 1849. The boundaries of the county were defined and, according to the first section of the act, the County of Lucas became a reality after the fourth day of July, 1849.

The urge for emigration to the west and the desire of people to seek their fortunes elsewhere, naturally attracted a virile, hardy stock of husbandmen to the plains that lay west of the Mississippi river. In due time men and women, single or with families, came to the south central portion of the territory and took up their abode in Lucas County. Along this westward trail of new homeseekers there came, in due time, a mere handful of men who belonged to the great profession of medicine. Not that the profession, as we now understand it, was then great; not that the men of that day, as we look back upon them in the light of modern education and training, were great; but they represented the best of America's humanitarians as they existed in that day; and too much credit cannot be given to these early stalwart men who, facing the hardships, the privations and the dangers incident to the settling of the new territory, made it possible for the emigrant families to have the best care, medically and surgically, then known to American medicine.

Only those persons, who have been privileged to know the early pioneer doctor as he existed and lived in the trying days of the settling of the new territory, are in a position to understand the trials and tribulations which were his and which, oftimes, he was obliged to endure in silence and in many instances, unaided. The very fact that the entire responsibility of a trying situation rested upon him proved a stimulus to the physician, and undoubtedly it was the means which brought out the resourcefulness, the tactfulness, and the keen observing qualities which stamped so clearly the early harbinger of medical science and skill. One cannot help but contemplate, in retrospect, the enormous amount of good which the physician, in an early day, did for those pioneers who blazed the trails, forded the streams, cut the forests, built the log cabins, turned the virgin prairie soil into productive farmland, and thus made it possible for those individuals, who came after them, to enjoy the rich fruits of a self-sacrificing people who were liberty loving and God fearing in their makeup. In the community where he resided, the doctor was looked upon by the people as a man of wisdom, of learning, and of peculiar attainment. His presence made it possible for towns and villages to spring into existence and to grow. His devotion to the welfare of his clients grew with the years as he acquired knowledge and experience, and in many a household his name was revered from the oldest, who called him "Doc," to the youngest, who could but lisp his name.

These sturdy pioneer physicians long since have gone to their just and deserved reward. Likewise, most of the people they served have joined them in the better land. Only the knowledge of their existence and a few scattered records of their works are left to remind the present generation of their unselfish devotion to the cause of humanity and progress. All hail to these early devotees of the healing art. May their ashes rest in peace and may their lives serve as a stimulus to those who are carrying on in their places today, so that they too may sing with the poet—

Lives of great men oft remind us
We should make our lives sublime;
And in parting leave behind us
Footprints on the sands of time.

And thus, with these prefatory remarks, we begin the description of those who have created and made history in the field of medicine in Lucas County. T. B. T.

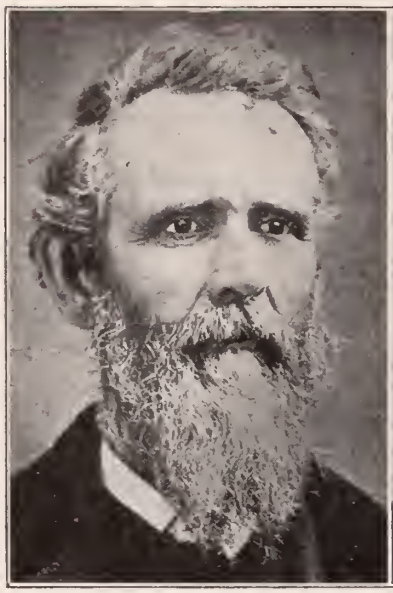
PHYSICIANS WHO HAVE PRACTICED IN CHARITON

The Doctors Waynick: Pioneer Physicians

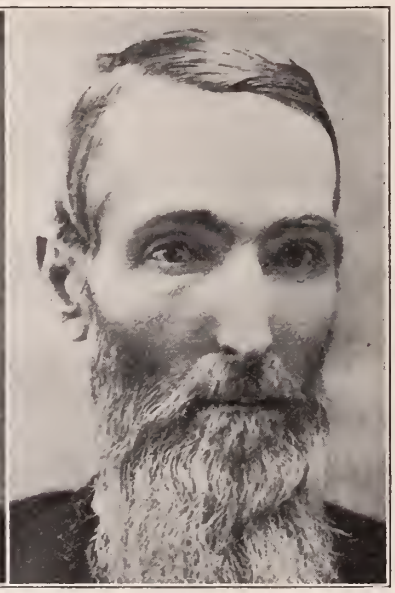
The history of medicine in Lucas County begins with the coming of the Waynick brothers, who were the first physicians to locate in this part of the state.

Dr. William D. Waynick and Dr. Wyatt W. Waynick were the sons of Peter and Susannah (Broom) Waynick, natives of North Carolina. Their father was of German, and their mother of English, descent. These early pioneers of Iowa

were born not far from Beaufort, Guilford County, North Carolina; William D. in 1821 and Wyatt W. in 1823. The family emigrated to Indiana in 1832 and located near Green Castle, where Asbury University was founded. Mr. Peter Waynick became one of the trustees of the institution and it was here that his children received their literary education and his sons attended medical lectures.



William D. Waynick, M.D.
1821-1884



Wyatt W. Waynick, M.D.
1823-1908

The Waynick family, consisting of the parents and eleven children, later emigrated to Iowa. The first to come were the three brothers, Dr. William D., Dr. Wyatt W., and Iverson H., who arrived in Lucas County in the month of June, 1848. They took land claims in the eastern part of the county, where they built a cabin and remained throughout the winter of 1848-49. The county at that time was not organized, there being no county seat. The following year other members of the family came west with other emigrants and soon all of the family arrived to make their new home on the prairie soil of Iowa. The county seat was established later at Chariton, and cabins began to spring up in the new town in the early fifties. Dr. William D. and Dr. Wyatt W. Waynick were the first doctors to locate in Lucas County and they were the first to build in the town of Chariton, as the records show they entered the town-site.

The Waynick family was one with very numerous connections and was among the leading families of this part of the state. The first marriage in Lucas County, of which there is any record, was a sister of these two doctors, Miss Louisa J. Waynick, who was united in marriage to Samuel A. Francis, November 15, 1849, by James Peck, Justice of the Peace. The Waynicks were prominently interwoven with the pioneer history of Lucas County. They owned many sections of land, entering much and purchasing from others who had filed on claims.

The Waynick brothers were active practicing physicians in the community until about 1860 or 1865, when they divided their attention between medical practice and an interest in the drug trade and the merchandising business. Dr. William D. Waynick officiated at the birth of the writer's youngest sister, Nancy Elizabeth, May 20, 1863. He was our family physician and the last call I remember of him making, professionally, to our home, was in the summer of 1869. Dr. Waynick died at his



Joseph B. Waynick, M.D.
1859-*



Ira Watt Waynick, M.D.
1858-1930

*Date of death uncertain.

home in Chariton in 1884. His remains were buried in the Chariton Cemetery.

Dr. Wyatt W. Waynick first came to Iowa Territory in 1846, about the time the territory became a state. No concise information could be obtained as to what part of the state he resided in during his first brief sojourn. Suffice it to say that he afterwards located in Lucas County with other members of the family, as already stated, in 1848. He was married to Miss Hannah Jane Caldwell, a daughter of a Campbellite minister residing in Putnamville, Indiana. For many years he practiced his profession in Chariton. In 1887, some years after the death of his brother, Dr. William, he moved to Oklahoma. Later he took up his residence in Dallas, Texas, where he died May 2, 1908. The members of his family have all passed away, excepting two daughters, Miss Kittie and Miss Belle, who reside in Oklahoma City, Oklahoma, and to whom the writer is indebted for information concerning their father and brother, Dr. Joseph B. Waynick, and for the loan of photographs.

Dr. Joseph Burk Waynick was the son of Dr. Wyatt W. Waynick, who came to Lucas County in the spring of 1848. Here Joseph was born May 26, 1859, and, later, grew to manhood. He attended the public schools in Chariton and also was enrolled in St. Francis College for two years. He began the study of medicine in 1877 with Dr. John W. Culley, and remained with him for eighteen months. In 1879 he went to Ann Arbor, Michigan, where he attended a course of lectures at the University Medical School. Returning to Chariton he assisted Dr. William H. Gibbon in his practice. In the fall of 1881, Dr. Waynick entered the medical department of the State University of Iowa, in Iowa City, where he received his degree in the class of 1882. He immediately located in Lucas, a mining town west of Chariton, where he was a successful practicing physician for several years. He was married to Miss Maggie Shular, of Chariton, in 1883. She was a daughter of the Hon. A. J. Shular, an early settler of Wayne and Lucas Counties. About 1884, Dr. Waynick moved to Indiana and located in the town of New Carlisle. A letter of inquiry from the writer to the doctor at this address was returned with the word "deceased" stamped across its face. All attempts to acquire further particulars concerning his demise have been unsuccessful except to learn that he has relatives residing in Oregon, California, Washington, and other of the far western states. His wife's people reside somewhere in Canada.

Ira Watt Waynick was born in Chariton, September 23, 1858. He was the third of ten children of Iverson H. and Elizabeth (Mitchell) Waynick. He was also a nephew of Dr. William D. and Dr. Wyatt W. Waynick and a cousin of Dr. Joseph B. Waynick, all of Lucas County. Watt, as he was familiarly called, was educated in the Chariton public schools; after which he studied medicine in the local office of Drs. James E. and Theodore P. Stanton. He later entered the Rush Medical College, in Chicago, from which institution he was graduated in 1883. He located immediately in Belinda, a village in Pleasant Township, in the northeastern part of the county.

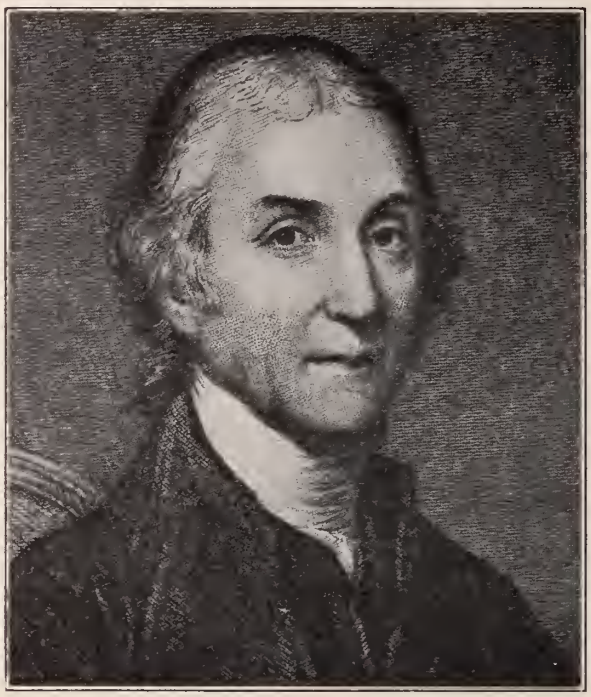
The doctor decided after a year's stay, however, that the local field was too small. Accordingly, he went pioneering in Nebraska and located at Sargent, a town in Custer County. Here he soon acquired, as a general practitioner, a popular practice which extended for many miles into the surrounding country. He likewise established drug stores at Sargent and Broken Bow and was instrumental in organizing a bank in his home town. He also was interested in other enterprises that helped to build up the town. Dr. Watt was appointed a colonel on the staff of Governor Ezra P. Savage. While serving in this capacity he accompanied the Governor and other members of his official staff in their private car to Seattle, Washington, where the keel of the battleship "Nebraska" was laid with due ceremony, July, 1902. Dr. Waynick devoted much of his time in later years in looking after his business interests and land investments in Nebraska, Kansas and Iowa. The doctor was a very dignified man. He never spoke needlessly, but what he did say was well worth listening to. He died November 19, 1930, while a patient at the Mayo Clinic in Rochester, Minnesota. At his death he left a widow, Mrs. Nellie (Shepherd) Waynick, of Topeka, Kansas, and two children.

A TRIBUTE

Without question the Waynicks left a deep and lasting impression on the medical fraternity of Lucas County. As pioneer physicians they were entitled to much credit which, perhaps, they did not receive during their lifetime. They were substantial men who endured the hardships of the early days and endeavored to serve their fellowmen to the fullest of their ability. Like many others of their day, they divided their time between their medical duties and business interests. Yet, withal, their devotion to their chosen profession lingered longest in their desires and they continued to serve their patients unstintingly until they were incapacitated by failing health. It is with mingled emotions that the writer pays these old friends and patrons of medicine in Lucas County this late, but well deserved, tribute.

(To be continued next month)

Commemoration of the Two Hundredth Anniversary of the Birth of Joseph Priestley



Joseph Priestley, LL.D., F.R.S.
1733-1804

At the regular meeting of the Des Moines Academy of Medicine and Polk County Medical Society, Tuesday, March 28, Dr. Walter L. Bierring presented the following remarks:

MR. PRESIDENT: Many scientific societies are commemorating this month the bicentennial anniversary of the birth of Joseph Priestley, the discoverer of oxygen. As he is the direct lineal ancestor of three generations of practicing physicians in this city who have held membership in the Polk County Medical Society, it seems fitting on this occasion to recall some of the salient facts in the life of this distinguished theologian, scientist and philosopher.

Doctor Priestley was born at Fieldhead, near Leeds in Yorkshire, on the 13th of March, old style, 1733. The so-called new calendar was not adopted by the English Parliament until 1752, and it was then decreed to start the same on September 2, 1752, adding the necessary 11 days of difference so that the following day would be September 14, 1752. Doctor Priestley died at Northumberland, Pennsylvania, on February 6, 1804, and a letter of his devoted friend, Mr. Thomas Cooper, the chemist, acquainting Dr. Benjamin Rush of Philadelphia of the same, states, "that he would have been seventy-one the 24th of next month." The difference of 11 days in the two birthdays, March 13th and 24th, between the old style and new style calendar, is thus explained.

In these brief remarks it is not possible to present a comprehensive account of this truly remarkable man, the many activities in which he was interested, and the valuable contributions which he made to the knowledge of his period.

His learning must have been unusual. Between the ages of eleven and thirteen, it is stated that he read most of the works of Bunyan, as well as other writers on religion, besides the common Latin authors, and at an early age learned Greek, Hebrew, Chaldee, Syriac, and Arabic. He later also acquired a fluency in French, and at one time thought of settling in France after the revolution. In a letter written on shipboard in 1794, sailing for America, he writes that "he read the whole of the Greek testament and the Hebrew bible as far as the first Book of Samuel," during the voyage.

While of a deeply religious nature, he did not belong to any established church. By many he is regarded as the founder of the Unitarian Church. His writings indicate that he regarded "the sound principles of religious knowledge as the sufficient foundation of a virtuous and truly respectable conduct in life, or of a good hope in death". He

continued as a minister throughout the entire period of his life, and carried on his extensive scientific experiments at the same time.

In his autobiography Joseph Priestley states that he first became interested in chemistry in Leeds, where he moved in 1767, while living next door to a public brewery. He amused himself with making experiments on the fixed air which he found ready made in the process of fermentation. Following this he discovered more new gases than all his predecessors had done, in spite of the fact that he lacked the careful scientific training of his contemporaries, and was compelled by reason of his limited income as a minister, to create his own apparatus. He laid the foundation of gas analysis; he discovered the complementary action of animal and vegetable life upon the constituents of the atmosphere; and finally, he crowned his work, in 1774, by the discovery of that "pure dephlogisticated air" to which the French chemist, Lavoisier, subsequently gave the name of oxygen. Its importance as the constituent of the atmosphere which disappears in the processes of respiration and combustion, and is restored by green plants growing in sunlight, was proved somewhat later. For these contributions he was awarded the Copley Medal by the Royal Society of London,* November 30, 1773.

His publications consist of many volumes and cover a great variety of subjects. In 1767, appeared the first edition of *The History and Present State of Electricity,* with original experiments. He had met Dr. Benjamin Franklin in London a few years before, and it was largely his interest and influence that induced Priestley to publish his work on electricity. A second edition was printed in 1769, and a third and enlarged edition, in 1775.

The History and Present State of Discoveries Relating to Vision, Light and Colours, a volume of 810 pages with many drawings, was printed in London in 1772. It refers to the observations of Bacon, Kepler, Sir Isaac Newton, the invention of telescopes and microscopes, discoveries concerning the rainbow, refraction and inflection of light, and the nature of colors. The large number of accompanying illustrations is a distinct feature of the work. It is dedicated to "His Grace, the Duke of Northumberland, Earl Percy." The names of the subscribers, about 450, are printed in the book, and among these are noted the names of Dr. John Fothergill and Dr. William Heberden, famous London physicians, Benjamin Franklin, who ordered twenty copies, Edmund Burke, Charles Fox, Sir Joshua Reynolds, Josiah Wedgewood, and many of the nobility.

A volume setting forth his experiments and observations on air, and other branches of natural philosophy was printed in London in 1779, and later enlarged to six volumes, published in Birmingham in 1790.

The Theological and Miscellaneous Works of



James Taggart Priestley, M.D., D.Sc.* 1852-1925

Crayke Simpson Priestley, M.D.* 1875-1904

Joseph Biddle Priestley, M.D.* 1901-

* The address of Sir John Pringle Bart, president of the Royal Society, conferring the Copley Medal to Joseph Priestley, is one of the prized possessions of the Iowa State Medical Library.

*Degrees conferred by the University of Pennsylvania.

Priestley, in 25 volumes, were published after his removal to America, in 1794.†

The extensive correspondence of Priestley with contemporary spirits, has been published in several volumes, and offers further evidence of his versatile mind.

When Priestley came to Birmingham in 1780, he was taken into membership of the Lunar Society, founded some years before by Dr. Erasmus Darwin (grandfather of Charles Darwin), and comprised an interesting group of men of genius, as James Watt, the inventor; Josiah Wedgewood, pottery manufacturer; Dr. William Withering, of digitalis fame; and Matthew Boulton, a partner of James Watt, and inventor of improvements in the steam engine. They seem not to have numbered more than eight or ten at any one time, and met at each others' houses for dinner every month on the Monday nearest to the full moon, "in order," says Doctor Priestley, "to have the benefit of its light in returning home." Hence the name Lunar Society.

Because of his religious views, he was stoned and driven out of Birmingham on July 14, 1784 (Bastille day), and yet well along in the next century, on August 1, 1874, the one hundredth anniversary of the discovery of oxygen, a statue of Priestley was presented to the town of Birmingham at which Thomas Huxley gave the address, closing with the words, "If the nineteenth century is other and better than the eighteenth, it is in great measure to him and such men as he that we owe the change. If the twentieth century is to be better than the nineteenth, it will be because there are among us men who walk in Priestley's footsteps. Such men are not those whom their own generation delights to honor, such men in fact, rarely trouble themselves about honor, but ask in another spirit than Falstaff's, 'What is honour? Who hath it? He that died o'Wednesday?' But whether Priestley's lot be theirs, and a future generation in justice and in gratitude, set up their statues; or whether their names and fame are blotted out from remembrance, their work will live as long as time endures."

In September, 1792, the National Assembly of France voted him a Citizen of France, and also, the nomination by the department of Orne to the next National Convention. He accepted the honor of citizenship, but was unable to take up his residence in France.

On account of the unsettled state in his own country, Priestley decided to immigrate to America, where his oldest son, Joseph, had preceded him. He set sail on April 7, 1794, and arrived in New York on the 4th of June. He was touched by the unusually cordial welcome accorded him upon arrival in New York by the press, the Democratic Society, Tammany Society, and the Medical Society of the City of New York. The American Philosophical Society of Philadelphia (founded by Franklin in 1727) welcomed him to the City of Brotherly Love. Unfortunately, his friend Doctor Franklin, who had frequently urged him to come to Philadelphia, was not living. He decided to setttle at Northumberland, Pennsylvania, on the beautiful Susquehanna river, north of Harrisburg. Here he built his home, which still stands, and fitted up a laboratory to carry on his scientific experiments. Soon afterwards, he was advised of his appointment as professor of chemistry in the University of Pennsylvania. He was greatly attracted by the offer, but feared the long journey to Philadelphia and the discomforts and absence from his new home in Northumberland, so that he felt it necessary to decline.

Most of the extensive correspondence of his American period has been preserved and indicates the forming of intimate friendships with Dr. Benjamin Rush, Dr. Wistar, and other medical men of that time in Philadelphia. There are many letters exchanged in a very friendly vein, with President Jefferson, as well as accounts of taking tea with Washington, Adams and Madison.

He lectured frequently, in Philadelphia before the American Philosophical Society, and at the University of Pennsylvania.

Dr. Priestley died in Northumberland on February 6, 1804, rich in honors and the blessings of friendship with the leading spirits of his time. His grave in Riverview Cemetery has become a shrine, especially for chemists. The old home is maintained as a museum of chemistry by the Pennsylvania State College. Here is displayed much of the chemical and electrical apparatus used by Priestley, his old microscope and projection lantern, the original manuscript of his autobiography, a signet ring presented by Franklin, and many other treasures.

The American Chemical Society was organized in Northumberland on the one hundredth anniversary of the discovery of oxygen, August 1, 1874. This society has also established the Priestley Medal as an annual award for some conspicuous contribution in chemistry.

In a house across the street from the old Priestley home, our James Taggart Priestley was born July 19, 1852, the son of Marks John Biddle Priestley (1823-1898), a great grandson of Joseph

† All the publications of Priestley here mentioned are a part of the library of the late Dr. James Taggart Priestley, to which valuable additions have been made by his grandson, Dr. Joseph B. Priestley.

Priestley. He began the study of medicine with his uncle Dr. Joseph T. Priestley, M.D. (Univ. of Penn., 1856) and was graduated from the University of Pennsylvania in 1872, coming to Des Moines in 1874. Here he practiced for fifty years and rose to leadership in Iowa medicine. His alma mater conferred upon him the honorary degree of Doctor of Science in 1914. He lives in our memory as the finest example of cultured physician met along life's pathway.

His son, Dr. Crayke S. Priestley, was also a graduate of the University of Pennsylvania, 1894, and after several years of postgraduate study in European medical centers he entered practice in this city. His fine training, pleasing personality, and advantage of acquaintanceship seemed to augur a most promising career of usefulness and professional leadership. His untimely death in 1904 brought forth the keenest expressions of regret.

During the past year we have welcomed into our membership one of the third generation to carry on the Priestley name in Iowa medicine. He bears the same name as his distinguished ancestor, and is the sixth in line of direct lineal descent. By individual merit we know he will always have the confidence of his colleagues, and we are equally confident that he will be an honor to the fine lineage that is his heritage. W. L. B.

IDEALS OF OSLER

A recent issue of *Hygea* contained the following from the writings of Dr. William Osler:

I have had three personal ideals. One to do the day's work well and not to bother about tomorrow. It has been urged that this is not a satisfactory ideal. It is; and there is not one which the student can carry with him into practice with greater effect. To it, more than anything else, I owe whatever success I have had—to this power of settling down to the day's work and trying to do it to the best of one's ability and letting the future take care of itself.

The second ideal has been to act the Golden Rule, as far as in me lay, toward my professional brethren and toward the patients committed to my care.

And the third has been to cultivate such a measure of equanimity as would enable me to bear success with humility, the affection of my friends without pride, and to be ready when the day of sorrow and grief came to meet it with courage befitting a man.—*The Diplomate,* March, 1933.

MEDICINE MEN OF AMERICAN INDIANS SAID TO HAVE ANTIDATED HIPPOCRATES

"While white men were 'mercifully' putting their wounded to death, the Indians were saving theirs with anesthetics and fairly good surgery," Dr. Harlow Brooks, professor emeritus of chemical medicine at New York University and Bellevue Hospital Medical College, declared at a meeting of the Kings County Medical Society in Brooklyn. Dr. Brooks, who has made an extensive study of the medical and surgical heritage from the "Amerind," said he has "found a wealth of medical lore which had remained hidden because we have been too interested in ethnology and archaeology to look."

Smallpox, measles, scarlet fever, tuberculosis, and social diseases he found were unknown among the red men until the white man came.

"Long before Hippocrates," said Dr. Brooks, "the Amerinds were probably practicing their art that had become a science. They were using thorns and skewers for bringing the lips of wounds close together."

Among Amerind contributions, he cited the Cesarean operation, cocaine, cascara, quinine and sedatives, analgesia, dental bridgework, artificial legs, splinting of fractures and dislocations, mending stab wounds and shot wounds, cures for snake bite we have never learned.

"How many of us without our modern appliances would have been able to practice in the Stone Age? We must remember that these medicine men did remarkably well, and that without benefit of kits or drug stores."

He found the "most just criticism of their methods that they mingled religious ceremony with practice. But few rituals, even in modern service, are as dignified as an Indian chant. And what about the exorcisms of the psychoanalyst?"

Dr. Brooks declared that much Indian resentment to missionaries was because these latter lacked the surgical knowledge Amerinds needed and said Jesuits succeeded best because they had some little medical ability.—*The Diplomate,* March, 1933.

STUDIES ON THE EXANTHEMATA

After an experience based upon the study of 40,000 persons, the Committee on the Costs of Medical Care reports that by the time individuals have reached twenty years of age, 89 per cent have had measles, 77 per cent have had whooping cough, 63 per cent mumps, 52 per cent chickenpox, 11 per cent scarlet fever, and 10 per cent diphtheria.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

AMERICAN AND CANADIAN HOSPITALS—A Reference Book giving historical, statistical and other information on the Hospitals and Allied Institutions of the United States and Possessions, and the Dominion of Canada.—Edited by James Clark Fifield, with the cooperation of the American Hospital Association.—Midwest Publishers Company, Minneapolis, Minn.—Price, $10.00.

CLINICAL DIAGNOSIS, Physical and Differential.—By Neuton S. Stern, A.B., M.D., Associate Professor of Medicine, University of Tennessee School of Medicine, Memphis.—Price, $3.50.—The Macmillan Company, New York, 1933.

DISEASES OF THE HEART Described for practitioners and students by Sir Thomas Lewis, C.B.E., F.R.S., M.D., D.Sc., LL.D., F.R.C.P., physician in charge of department of clinical research, University College Hospital, London; physician of the staff of the Medical Research Council.—Price, $3.50. —The Macmillan Company, New York and London, 1933.

HOW TO BUDGET HEALTH.—Guilds for Doctors and Patients. —By Evans Clark, director Twentieth Century Fund.—Harper & Brothers, Publishers.—New York and London.—1933. —Price, $4.00.

INTERNATIONAL CLINICS.—Volume I, Forty-third Series.— March, 1933.—Edited by Louis Hamman, M.D.—Octavo.— 305 Pages.—Sixteen illustrations, one colored plate.—J. B. Lippincott Company, Philadelphia, Montreal and London.— Price, $3.00.

MAN AS PSYCHOLOGY SEES HIM.—By Edward S. Robinson, Professor of Psychology, Yale University.—The Macmillan Company, New York, 1932.—Price, $2.50.

THE PELVIS IN OBSTETRICS—A Practical Manual of Pelvimetry and Cephalometry, including chapters on Roentgenological Measurement.—By Julius Jarcho, M.D., F.A.C.S., Consulting Gynecologist, Hastings Hillside Hospital; attending Obstetrician and Gynecologist, Sydenham Hospital.— 140 illustrations and 51 tables.—Paul B. Hoeber, Inc., New York, 1933.—Price, $6.00.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS.— DERMATOLOGY AND SYPHILOLOGY, Edited by Fred Wise, M.D., Professor of Dermatology and Syphilology, New York Postgraduate School of Medicine and Hospital of Columbia University; and Marion B. Sulzberger, M.D., Associate in Dermatology and Syphilology, New York Postgraduate School of Medicine and Hospital of Columbia University.—Series 1932.—The Year Book Publishers, Chicago.

THE PRACTICAL MEDICINE SERIES.—GENERAL THERAPEUTICS, Edited by Bernard Fantus, M.S., M.D., Professor of Theraptutics, University of Illinois College of Medicine, and Louis B. Kartoon, B.S., M.D., Instructor of Medicine, University of Illinois, College of Medicine.—Series, 1932.— The Year Book Pubishers, Chicago.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS.— NEUROLOGY, Edited by Peter Bassoe, M.D., Clinical Professor of Neurology, Rush Medical College of the University of Chicago. PSYCHIATRY, Edited by Franklin G. Ebaugh, A.B., M.D., Director, University of Colorado Psychopathic Hospital, Professor of Psychiatry, University of Colorado School of Medicine.—Series 1932.—The Year Book Publishers, Chicago.

BOOK REVIEWS

THE ACTION OF THE LIVING CELL

An experimental research in biology by Fenton Benedict Turck, M.D. The Macmillan Company, 60 Fifth Avenue, New York City, 1933. Price $3.50.

Nearly forty years ago the late Dr. Fenton Benedict Turck, who died last autumn, gave biology a new concept of physiologic shock. Biologists had long recognized that cells growing in masses exerted an influence upon one another which might be of such an unfavorable nature as to produce cell death. To this intercellular substance Dr. Turck applied the name cytost, and throughout the remaining years of his life, vigorously conducted experiments bearing upon this observation.

This volume published posthumously epitomizes his life work and summarizes his hundreds of experiments and observations. His most important contributions, perhaps, have been in the field of surgical shock.

Cell poison or cytost produced in small quantities may prove stimulating to neighboring cells. However, cytost produced in quantities, acts as a poison causing shock and often death. Upon a background of painstaking experimentation, Dr. Turck developed his theory to explain the mechanism of shock, protein poisoning, some allergies, focal infections, and vaccines. Concerning the composition of cytost Dr. Turck candidly states, "It is a biochemical problem which still awaits solution." As might be expected of a true scientist Dr. Turck closes his work in the "earnest hope that other investigators will attempt to repeat and extend these observations."

The volume is one of the most stimulating, thought-provoking accounts of scientific research which has come to the writer's attention. Stripped to a large degree of technicality the volume reads with all the ease of a less scientific work. The book is especially recommended to the physician whose interests carry him beyond "bread and butter medicine," and to the intelligent layman with a sufficient background of science to appreciate the unfolding and consummation of the author's theory of the action of living cells.

ANATOMY OF THE BRAIN AND SPINAL CORD

By William W. Looney, M.D., Professor of Anatomy, Baylor University College of Medicine. 370 pages, illustrated. F. A. Davis Company, Philadelphia. 1932. Price $4.50.

The complex anatomy of the brain and spinal cord is presented in a simple, straight forward manner which is of distinct advantage to the student and general practitioner. The subject material is well illustrated, and only the essential points are stressed. Should the student or general practitioner have a desire for a more complete and detailed presentation, sufficient references are furnished in this volume. However, for the specialist or as a guide to further research, this book in itself is hardly adequate.

It serves a distinct purpose in correlating the anatomy of the nervous system, with a well written chapter on the sympathetic nervous system, and a number of illustrative case reports demonstrating the clinical picture at various levels of the nervous system.

W. D .A.

ALCOHOL AND MAN

The Effects of Alcohol on Man in Health and Disease. Editor, Haven Emerson, M.D.; Associate Editors, Henry A. Christian, M.D.; Reid Hunt, M.D.; Arthur Hunter, LL.D.; F.A.S., Charles C. Lieb, M.D.; Walter R. Miles, Ph.D.; Ernest G. Stillman, M.D. 451 pages. The Macmillan Company, New York, 1932. Price $3.50.

It is indeed timely that a scientific discussion of the effects of alcohol on man in health and disease should be presented by unquestionable authority and without bias or prejudice. This volume fills such a need.

Prepared by nationally recognized scientists, without moral or financial aid from advocates or opponents of federal prohibition, and written in a language which is easily understandable by the intelligent layman, this volume will appeal alike to physicians and to the critical reader without medical education. The subject discussed in the volume divides itself logically into six sections: (1) the effect of alcohol on human functions; (2) the effect of alcohol on the cell and in heredity; (3) alcohol as a poison and a medicine; (4) alcohol and body resistance and pathology; (5) the effect of alcohol on man's conduct and mentality; (6) alcohol and longevity, mortality and morbidity.

In each part there are two or more chapters prepared by different observers treating special phases of the subject. The authors conclude that alcohol taken in moderation does not act injuriously upon the body tissues, and does not shorten the span of life. Taken in excess it serves as a protoplasmic poison, removing inhibition and permitting those of mentally defective character or psychopathic personality to become dangerous. They further point out that alcohol used in excess over considerable periods of time increases the incidence of degenerative diseases and shortens the expectancy of life span.

While mentioning the usefulness of alcohol in old age in certain forms of infection, as a stomachic, and during convalescence, they summarize, "As therapeutic agents, alcoholic beverages have a place in rendering more comfortable and peaceful the disturbances of chronic disease and old age. Sometimes it is useful to increase appetite."

No more thorough or authoritative discussion of this important subject has come to the reviewer's attention.

ASTHMA, HAY FEVER AND RELATED DISORDERS

A Guide for Patients. By Samuel M. Feinberg, M.D., F.A.C.P., Assistant Professor of Medicine and Attending Physician in the Asthma, and Hay Fever Clinic, Northwestern University Medical School; Attending Physician, Cook County Hospital, Chicago. Illustrated. Lea and Febiger, Philadelphia, 1933. Price $1.50.

This volume, devised primarily as a guide for patients, in no way attempts to instruct the public in the diagnosis or treatment of their condition. It is the author's belief that an understanding of these conditions by the patient will insure his more complete cooperation and consequently his more thorough management.

The book is useful to the patient and the doctor alike, since its clear, understandable, non-technical language not only informs the intelligent patient, but gives the physician not specializing in allergy much insight into the very frequent allergic manifestations. The data concerning foods and the allergic environments of a patient should be helpful to every physician. The volume is illustrated.

MEDICAL CLINICS OF NORTH AMERICA

(Issued serially one number every other month.) Volume xvi, No. 4. (Boston Number, January, 1933.) Octavo of 256 pages with 33 illustrations. Per Clinic Year, July, 1932, to May, 1933. Paper, $12.00; Cloth, $16.00 net. Philadelphia and London. W. B. Saunders Company, 1933.

This Boston number of the Medical Clinics contains an unusual number of discussions of particular interest to the general practitioner. The opening clinic by Dr. George R. Minot discusses three cases of chronic dietary deficiencies, which are no doubt typical of many cases seen by the general practitioner in which the diagnosis is obscure because of the vague symptoms revealed by the patient. In each of these cases Dr. Minot was able to secure satisfactory results only by a most detailed and painstaking history of the patient's dietary regime.

The discussion of the treatment of diabetes by Dr. Harry Blotner outlines in a non-technical fashion the management of diabetes, presenting suggested diets and also the insulin therapy necessary over prolonged periods of time.

The electrocardiographic observations in diphtheria, presented by Dr. James M. Faulkner, shed much light upon the clinical picture of myocardial weakness so frequently observed following diphtheria. The cases cited suggest "that while the cardiac muscle fibres may be able to regenerate completely, perhaps the more highly specialized conducting tissues are not able to do so, and the patient is left with a conduction disturbance which does not mean persistent myocardial disease."

THE HISTORY OF DERMATOLOGY

By Wm. Allen Pusey, A.M., M.D., LL.D., Professor of Dermatology Emeritus, University of Illinois. Illustrated. Charles C. Thomas Publishing Company, Springfield, Illinois, and Baltimore, Maryland. Price $3.00.

Dr. Pusey begins his history by citations of the Edwin Smith papyrus and the Ebers papyrus, the two oldest known chronicles dealing with medical subjects. They antedate the Greek civilization about the same number of years that Greek civilization antedates our present civilization. From this early be-

ginning he traces the known history of dermatology through the Greco-Roman period, through the medieval period when all learning regressed, through the Renaissance, to the period of modern dermatology which was ushered in by the laboratory studies of anatomy and pathology of the skin, and its microparasitology.

While this monograph is presented only as a summary of the history of this important subject, it contains that richness of detail and vividness of description which has ever characterized Dr. Pusey's writings. The hand of a genius is apparent in the selection of material included in the text, and the physician, regardless of his practice, will enjoy this historical study throughout every page.

That the volume is timely is borne evidence by the fact that before this writing there was no history of dermatology appearing in the English language. The volume is richly illustrated by selected prints from many sources. The closing pages are devoted to an extensive bibliography and an historical index of dermatology.

This review would not be complete without mention of the superior workmanship exhibited in the printing of this volume. The attractive binding, the choice paper, the clear print and faithful reproduction of the illustrations all bespeak the excellence and care of the bookmaker.

OFFICE SURGERY

By Fenwick Beekman, M.D., Visiting Surgeon, Bellevue Hospital, Clinical Professor of Surgery, New York University and Bellevue Medical College. Ninety-four illustrations. Published by J. P. Lippincott Company, Philadelphia and London. 1932. Price $5.00.

Every physician, whether limiting his practice to surgery or not, is required on frequent occasions to care for minor surgical conditions. This volume has been prepared with the thought of furnishing the general practitioner with detailed information concerning the diagnosis and treatment of these minor conditions rather than as a textbook in surgical practice.

The author introduces his discussion by a chapter dealing with the materials required for ordinary office surgery, proceeding to a discussion of anesthetics, wounds in general, wounds of special regions, with the remaining chapters of the volume devoted to injuries of special structures or special regions.

The volume is especially valuable in directing the scope of the examination required in these surgical conditions since, no doubt, failure in the handling of these cases is most frequently due to ignorance on the part of the physician, first, as to the possibilities in the case, and second, as to the complications which may be expected or may arise. We have not seen a more valuable volume to be placed in the hands of every practicing physician. We would commend it especially to the younger practitioner since his course in surgery in the medical school and his practice of surgery during his interneship has been so largely directed to major surgery that he may find himself quite deficient in the diagnosis and treatment of minor conditions which may come under his attention more frequently. We would commend the volume to the general practitioner of the older school since the presentation incorporates the newer discoveries and developments in surgical practice.

The volume is one of the best of the Everyday Practice Series which has come to our attention.

THE PRACTICAL MEDICINE SERIES

THE EYE: E. V. L. Brown, M.D., Professor of Ophthalmology, University of Chicago, and Louis Bothman, M.D., Associate Professor of Ophthalmology, University of Chicago. THE EAR, NOSE AND THROAT: George E. Shambaugh, M.D., Professor of Otology, Rhinology and Laryngology, Rush Medical College, and Elmer W. Hagens, M.D., Instructor in Otology, Rhinology and Laryngology, Rush Medical College. Series 1932. The Year Book Publishers, Inc., Chicago, 1932. Price $2.50.

While the specialty of ear, eye, nose, and throat is not new, advances in these specialties continue to be reported with such regularity that, if one wishes to be abreast of modern practice, a voluminous literature must be reviewed. Since the average practitioner is unable or unwilling to devote the time required for this extensive study, the condensation annually provided in the Practical Medicine Series continues to be gratefully received.

The current volume maintains the high standard of previous condensations and brings the literature in this specialty up to date. The significant contributions are briefly reviewed by recognized authorities and adequately amplified by editorial notes. Because of its wide scope, the volume will be appreciated by general practitioners and specialist salike.

THE INCOMES OF PHYSICIANS

An Economic and Statistical Analysis by Maurice Leven, Ph.D., Publications of the Committee on the Costs of Medical Care; No. 24. The University of Chicago Press, Chicago, 1933. Price, $2.00.

Of the $3,500,000,000 spent yearly on medical care by the American people, nearly half is paid by physicians, dentists and other licensed practitioners. Because of this fact, no study of the cost of medical care can overlook this important item.

This volume presents in detail the findings of the committee comparing the average net income in various communities with gross income, and separating the incomes received from general practice from those received from the practice of the specialties and surgery. One of the most interesting and instructive chapters deals with the "returns to the physician and the cost to the patient." In this chapter the economic position of the physician is dis-

cussed and compared with other professions and with the incomes received by the general population. The Committee concludes that "In most respects the problems of the medical profession are identical to those of the public, and, from the long-time viewpoint, at least, there is no room for a conflict of interests. It is to the advantage of both that the high ideals of the profession be preserved and strengthened."

Because of the nature of the data compiled in this volume, it will have an even wider appeal among physicians than other volumes of this series.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS—PEDIATRICS

Edited by Isaac A. Abt, M.D.. professor of pediatrics, Northwestern University Medical School; attending physician, St. Luke's Hospital, Chicago, with the collaboration of Arthur F. Abt, M.D., assistant in pediatrics, Northwestern University Medical School. Series 1932. The Year Book Publishers, Chicago.

Beginning with the problems which confront the pediatrician with the new-born infant such as those of feeding, nutritional disturbances, infectious diseases, etc., the volume carries the reader progessively through the various problems of infancy into those of later childhood. Indicative of the thoroughness with which the survey has been made, the subject of tuberculosis in children alone occupies twenty-one pages of the text. The recent observation of Calmette's B. C. G. vaccine indicates the present standing of this method of treatment in the hands of competent observers. Much of the remaining sixteen pages in this section is devoted to the diagnosis and manifestations of tuberculosis peculiar to childhood.

Other sections of the volume are equally complete and timely.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS—OBSTETRICS

Edited by Joseph B. DeLee, M.D., Professor of Obstetrics, University of Chicago Medical School. GYNECOLOGY, Edited by J. P. Greenhill, M.D.. F.A.C.S., Associate Professor of Clinical Gynecology, Loyola University Medical School, Professor of Gynecology, Cook County Graduate School of Medicine, Chicago. Series, 1932. Year Book Publishers, Chicago.

General interest has been aroused during the past year due to researches directed toward the determination of pregnancy by the recognition of hormones in the patient's urine. While this test has been recognized in the original form suggested by Aschheim for several years, its revival and perfection during the past year is especially noteworthy. We find that in the hands of competent observers the Aschheim-Zondek test or the Friedman modification are effective in about ninety-eight per cent of cases.

General interest has also been centered about an announcement that sex of the unborn child could be predetermined by the acid-base reaction of the vaginal canal. During the year, advances have been made in the hormone treatment of menstrual irregularities and dysfunctions. Not only has the hormone causing the menstrual cycle been recognized and studied, but also the biologic "antidote" to the menstrual hormone, which retards the excessive functions, has been studied. These, and hundreds of other timely and valuable observations in the field of obstetrics and gynecology, are reviewed in the volume.

If one would know the newer thoughts in medical science, ready access must be obtained to the current literature. The average physician is rarely able to devote the necessary time which is required for the extensive reading necessary if one is to keep abreast of the literature. It is for such busy physicians that this practical, authentic condensation of the year's literature has been prepared.

SANE SEX LIFE AND SANE SEX LIVING

By H. W. Long, M.D. Authorized edition. Eugenics Publishing Company, Inc., New York. Price, $2.00.

During the past few years several small treatises upon the sex relationships of marriage have been offered to the public. There are still those who believe that books of this sort are "shot-gun prescription," and really accomplish but little good. Others believe that the frank, wholesome, authoritative discussion of these vital matters in printed form accomplishes much more than can be hoped for by direct verbal discussion. Be that as it may, all are agreed that if such a book is prepared, it should have the background of mature medical wisdom and should discuss sex problems with frank understanding.

The present volume has been written especially for newly married couples, and those who have been married longer but who have failed to find proper sex adjustment. It follows the usual outline in presenting the psychologic aspects of the sex act, the anatomy and physiology of the sex organs, the act of coitus, abnormalities of the sex act and their effect upon the individual, concluding the discussion with a chapter on pregnancy.

The volume is one of the most useful, for the purpose intended, which has yet been published.

SEX AND INTERNAL SECRETIONS

A survey of recent research. Edited by Edgar Allen, University of Missouri, with a foreword by Robert M. Yerkes, Yale University. The Williams and Wilkins Company, Baltimore, 1932. Price, $10.00.

This book presents a survey of the most important researches in the problem of sex, especially those concerned with the internal secretions. It has been prepared by a distinguished group of the most eminent investigators in this field. The results presented

summarize a ten years' intensive study and faithfully reflect the most important American researches in this branch of endocrinology. This report should not be confused with many of the so-called popular books on sex, since it is designed for those interested in the progress of research and in the problems of sex, and will be appreciated only by the reader with a sufficient background of the biologic sciences and an adequate familiarity with research methods to avoid the confusion which might otherwise result from the technicalities of the report.

Each of the nineteen separate sections of the survey has been prepared by an authority especially qualified for that particular discussion. While most of the sections deal primarily with researches conducted with the laboratory animals and fowls, each section correlates this experimental evidence with recognized observations of a similar character made upon human beings. Two of the most interesting chapters for physicians are: Ovulation and the Transport and Viability of Ova and Sperm in the Female Genital Tract; and Endocrine Disorders in Sex Function in Man.

This volume stands preëminent in its particular field and the masterful manner with which the entire field of sex endocrinology has been reviewed, together with its thoroughness and authoritative background, makes it the most valuable single volume which has ever been prepared upon this subject. Because of the timeliness of this survey and its undeniable uniqueness in its field, the book should be invaluable to every physician.

THE SEX TECHNIQUE IN MARRIAGE

By Isabel Emslie Hutton, M.D., Physician to the British Hospital for Functional, Mental, and Nervous Diseases, London, Physician-in-Charge at the Ellen Terry Home, Reigate, Surrey. Foreword by Ira S. Wile, M.D., former commissioner of education, New York City, associate editor, American Medicine. Emerson Books, Inc., New York, 1932. Price, $2.00.

Acting upon the theory that "scientific knowledge enters into the art of living and loving" this author, an active physician since 1910, has prepared this treatise on the technic of sex relations in marriage as a guide to the "lay readers who are about to be married, or who have just entered marriage."

Following the general form of other volumes of this nature, which have recently appeared in this country, the author discusses with frankness the sex organs, the first sex act, and sex life throughout marriage. The closing chapter deals with birth control.

The book is written in a clear, unemotional fashion, which is meritorious because of its frankness. Its general tone must be considered conservative, and basically sound. The volume appears well suited for the purpose written, and the physician may safely recommend its purchase by adult readers requiring instruction concerning the sex relations of married life.

Five diagrams illustrate the book.

SIXTH INTERNATIONAL CONGRESS OF MILITARY MEDICINE AND PHARMACY, THE HAGUE, NETHERLANDS, JUNE, 1931

A Report of Commander William Seaman Bainbridge, M.C.F., U.S.N.R., for the Delegation from the United States of America. United States Government Printing Office, Washington, 1933. For sale by the Superintendent of Documents, Washington, D. C. Price, $1.00, cloth.

This small volume reports the transactions of the Sixth International Congress of Military Medicine and Pharmacy and the meeting of the Permanent Committee in 1931. Five major topics were discussed at the Congress: the recruiting, training and advance training of military medical officers and pharmacists; the psychoneuroses of war; methods of hemostasis on the battlefield; the preparation and storage of medicinal ampoules; and the sequelae of war wounds of the teeth and jaw.

These reports are particularly valuable and important since in most instances they are reported upon by delegates from European countries "from whose political horizons war clouds are rarely entirely absent."

A STANDARD CLASSIFIED NOMENCLATURE OF DISEASE

Compiled by The National Conference on Nomenclature of Disease, and edited by H. B. Logie, M.D., Executive Secretary. Copyright, 1933, by The Commonwealth Fund, New York City, printed by E. L. Hildreth & Company, Brattleboro, Vermont, January, 1933. Price, $3.50.

Three years ago, twenty-seven national societies and governmental bureaus in medical and statistical fields created the National Conference on Nomenclature of Disease. As a result of their combined efforts and their several contributions to this conference, a preliminary printing of a standard nomenclature was issued, early in 1932, and immediately put into operation in ten of the leading hospitals of this country. After nearly nine months' experience with this standard nomenclature, the various hospitals offered suggestions which have been incorporated in this, the first official printing of the book.

This volume is now presented to the profession to promote uniformity in the expression of thought and to encourage greater precision in the analysis of the causes of illness and death. Because of the painstaking thoroughness with which this classification has been developed, it should be promptly accepted by all medical reporting bureaus. If this is done, statistical inquiries in the future may be much more significant and valuable in the tabulation of mortality and morbidity figures. The volume should be owned by every hospital and insurance company. Since the individual physician must furnish the Bureau of Vital Statistics with the cause of death in all cases, this volume should be readily available for reference.

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DIAGNOSTIC ERRORS IN GYNECOLOGY*

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It is universally understood that the safest way to avoid gynecologic errors is by a thorough previous history (anamnesis), and a careful and painstaking general physical examination, before the attention is concentrated on the genitalia. Moreover, consideration of the bodily and psychic type of the individual as a whole (constitution) in addition to the knowledge of her present condition, may both be decisive for the final conclusions. In spite of this, diagnostic mistakes not infrequently occur and always will occur. This holds especially true for gynecology, which has only recently developed into a specialty in this country.

It must be remembered that one never should make a gynecologic examination, unless one is sure that the bladder is empty. A complete gynecologic examination consists of abdominal palpation; bimanual examination and inspection of the introitus, the vaginal wall and the cervix uteri by the aid of a speculum. Every physician should feel compelled to perform such a complete examination on every patient who complains of vaginal discharge and bleeding, pain, or other abnormal sensations in the lower abdomen, such as the feeling of bearing down, or disturbances in micturition and defecation. The number of diagnostic errors would be considerably reduced, and hundreds of unfortunate women saved from death by cancer, if every physician would fulfill this self-evident demand.

This paper is designed to recall several frequently forgotten or misinterpreted symptoms, and to report a number of unusual erroneous diagnoses, which show better than any theoretical discussion, how carelessness may lead to mistakes, and how easily they may be avoided.

*Read before the Dallas-Guthrie Medical Society, Panora, October 20, 1932.

Burning or smarting during micturition are generally looked upon as early symptoms of gonorrheal infection, particularly in nulliparae; this is true in most of the cases. It should, however, be borne in mind, that the same symptoms may develop if the urethra is infected with bacterium coli. This occurs more frequently during the first intercourse and is therefore spoken of as "defloration" urethritis. It is needless to say that it makes a considerable difference whether or not a husband, or any man, is blamed erroneously for having caused a gonorrheal infection. The diagnosis should be made only after smears have been examined. In addition to this, one must determine whether the first symptoms have developed within twenty-four hours after cohabitation, or only a week or ten days later. In the first case, it is more likely that the infection is due to bacterium coli.

Frequent micturition is thought to be caused in many cases by prolapse of the anterior vaginal wall (cystocele). This is true only for the cases where, at the same time, the fixation of the urethra to the periosteum of the pubic arch has become loosened. Otherwise, as a rule, the patient states that she has difficulty in voiding, unless she replaces the prolapsed vagina, thereby straightening the sharp-angled kink of the urethra, which obstructs the urethral canal when the cystocele protrudes through the introitus. In every case of frequent micturition, a catheterized specimen of urine must be examined. If no cystitis is found, one must ascertain whether or not the symptoms disappear during the night, or when the patient lies down. If so, relaxation of the bladder and the urethra are the cause. If the patient says that she is more bothered by the frequent micturition while she is in bed, the ailment is due to a nervous irritability of the bladder, which is frequently found at the climacteric age. Adequate treatment in such cases includes the administration of calcium or sedatives. The same holds true for cases in which the question arises as to whether or not a tumor in the immediate neighborhood of the bladder can be held responsible for pollakiuria.

Vaginal discharge (leukorrhea), especially at the time of puberty, in chlorotic and secondarily anemic women is not necessarily caused by an infection, but the possibility must be excluded by microscopic examination of smears in every case. Local treatment, except limited use of vaginal douches, should be omitted. Poor general condition, and occasionally endocrine disturbances of the thyroid gland (basal metabolism test) may be the cause. Improvement of the general condition by dietetic measures and thyroid extract, constitutes the proper treatment.

Among the menstrual disturbances, *amenorrhea* is always suggestive of pregnancy. One should never forget that a woman may conceive as long as she menstruates, regardless of her age. First conceptions at the age of fifty have been reported. On the other hand, one should always remember that every exhausting disease; anemia, change of climate and diet; psychic factors, such as the fear of pregnancy, or psychic shock of any kind, may cause temporary cessation of the menses.

By the same premise, pregnancy is the first consideration in every case of *irregular bleeding* during the child-bearing period; miscarriage and ectopic pregnancy in early stages, placenta presentation, in the second half of pregnancy. Characteristic of tubal abortion is the long duration of the bleeding, and, more decisively, the dirty brownish discoloration of the bloody discharge. The onset of hemorrhage is usually accompanied or shortly preceded by unilateral, cramp-like pain in the lower abdomen.

In addition to pregnancy and endocrine disturbances, the possibility of *malignancy* should be an ever-present challenge, regardless of the age of the patient. A cancer of the vagina or cervix may occur in a woman of eighteen, as well as in senility, and we have recently seen cancer of the body of the uterus in patients of thirty-two and thirty-four years, although this location is thought to be peculiar to women between the ages of fifty and seventy.

An occasional and slightly known symptom of *early pregnancy* is spontaneous pain and distress at palpation of the ovary containing the corpus luteum of pregnancy; this may be so intense as to lead to the erroneous diagnosis of acute appendicitis. This possibility should therefore enter into the consideration of every such case, and the diagnosis of appendicitis be made only when fever and leukocytosis are present.

Although it may seem superfluous, the *importance of careful percussion and palpation* in order to differentiate ascites and ovarian cysts must be reiterated.

A minor diagnostic error is the *confusion of a cystic tumor with a solid one,* and vice versa. In many cases, a correct diagnosis is impossible before, and sometimes even during, operation. As the indication for operation is identical in either case, such an error is not culpable.

Unusual diagnostic errors are reported in the following five cases. The first instance illustrates a mistake made because a previous history, seemingly correct, proved incomplete, due to the unreliability of the patient, a child of twelve.

CASE REPORTS

Case 1. The patient, a young white girl, twelve years of age, was admitted March 27, 1932. Menstruation began at eleven years of age, the periods coming at regular twenty-eight day intervals, and lasting from five to six days. The family history was negative.

Present complaint: Since May, 1931, she had complained of pain in the left lower abdomen. The pain was not radiating and not severe, and was often relieved by lying down. Although it occurred at irregular intervals, it was often worse when she had her periods. Starting six or eight months after the onset of the menstrual period, the pain had not shown any change in amount and regularity since its onset. The patient had missed several weeks at school because of the pain, but had had no pain for several days before admission.

Examination showed a well nourished girl, developed according to her age; crines scanty, breasts infantile. The lower abdomen was occupied by a mass which extended to the umbilicus. This mass was elastic, not fluctuating and several hard prominent nodules could be palpated on its surface. This tumor mass was communicating with an elastic, very tender mass, palpable in the cul-de-sac, from the rectum, and extending downwards within one and a half inches of the anal orifice, bulging both the anterior wall of the rectum and the posterior left wall of the vagina. The hymen was intact, admitting one finger; the vagina was wide, the normal slender cervix dislocated upwards and to the right side of the tumor.

Diagnosis: Cystic tumor of ovary, possibly dermoid cyst.

Advice: Extirpation by laparotomy.

Operation: On March 31, 1932, an operation was performed under gas-ether anesthesia. In order to avoid a median laparotomy scar, a transverse incision according to Pfannenstiel was made. After having opened the peritoneal cavity, the omentum was found pigmented by old blood, and the entire field of operation was occupied by an elastic tumor on top of which a small uterus was found on the right side, but tightly fixed to the tumor. Only after enlarging the incision, was one able to recognize that the uterus attached to the right side of the tumor was only one-half of the uterus although perfectly developed with ovary, fallopian tube and round ligament, and that on the left side a similar, slightly larger half-uterus was present. The left fallopian tube was attached to the surface of the tumor by some clots of blood. As it

was evident that the tumor could be nothing else than a hematocolpos and a hematometra of the left uterus, the laparotomy wound was closed and a great quantity of old tarry blood was emptied after incision of the tumor through the left, bulged vaginal wall near the introitus. For five days after the operation, the patient's fever remained at 102° (39° Celsius) reaching a maximum of 102.8° (39.4° Celsius) on the fourth day. Otherwise, she made an uneventful recovery, and has menstruated without pain since the operation.

Only after the operation did the mother, who was not present when the history was taken, state that she had always suspected something of the sort, as her daughter had been bedridden and in great pain at every menstruation. The child could have escaped laparotomy if this information had been forthcoming at the proper time.

Occasionally, the very clearness of a previous history may be so suggestive as to lead the physician astray. This can be avoided only if he refrains from making a diagnosis until he has performed a thorough and unprejudiced examination. The following two cases demonstrate what may happen when the physician is misled by an overly suggestive history.

Case 2. The patient was a white woman, thirty-two years of age, stout and with unusually thick abdominal walls. She reported that three years ago when she had her first and only child, she was discharged from the hospital shortly before delivery, by an eminent specialist who emphatically declared her not pregnant, and attributed the amenorrhea to some endocrine disturbance. At the time of the present admission she had been amenorrhoic again for nine months, after having menstruated regularly during the two years following the first delivery. She had experienced fetal movements, and feeling sure that she was pregnant again, wanted to make arrangements for the delivery. The attending physician, of course not the same who had failed to recognize the first pregnancy, declared the patient not pregnant since he could not hear any heart sounds, but finally admitted the possibility when informed by the patient that the impossibility of detecting fetal heart sounds had caused the previous mistake. At the onset of cramplike pain and a bloody discharge, the patient was admitted for delivery. After a short time the pains subsided and the patient continued to bleed, passing typically dark red, fluid menstrual blood.

The error could have been avoided in both instances by an x-ray examination. It is hard to understand why the second physician, who evidently had succumbed to the suggestive influence of the previous history, did not choose this simple way to avoid what must have been a very embarrassing mistake.

Case 3. The patient, a white woman, forty-eight years of age, had been married for twenty-eight years, but had never been pregnant in spite of the fact that she was anxious to have a child. At the age of thirty-one, a cyst of the left ovary had been removed. At this time the patient was told that, although the right ovary was found to be normal, it might some day also become cystic. This seemed to have happened, as the patient's abdomen had slowly but continually grown larger during the last year. Both the patient and the attending family physician had made the diagnosis and the latter had sent the patient to me for the removal of the cyst. The immediate reason was that the patient had decided to adopt a child and to move to an estate of her husband. Answering the question as to menstruation, the patient replied that she had gone through the menopause eight months previously and had had no bleeding since that time, and that she was very glad to say that she had experienced none of the various climacteric symptoms. This was suspicious, as the size of the abdomen was about that of an eight months' pregnancy. Before there was time to palpate the abdomen, or auscultate the heart sounds, a violent kick of the child against the uterine and abdominal wall, cleared the situation.

In the first of these two instances, the examination was incomplete. An x-ray picture would have shown the absence of a pregnancy. In the second case, the examination was entirely omitted because both the physician and the patient were already convinced that their diagnosis was correct. There is no doubt that the physician, had he made even the most superficial examination, would have recognized the pregnancy.

This, however, is not always a sufficient guarantee of a correct diagnosis, as the following cases may show.

Case 4. The patient, a white woman, forty-eight years of age, was admitted August 12, 1932, with the following history: Menarche at ten; periods regular every twenty-eight days, without pain; one instrumental and one spontaneous delivery, both children alive; no miscarriages; menopause at thirty-nine; family history negative.

Present complaint: The patient had noticed an increase in the size of her abdomen, and the attending physician, who made the diagnosis of dropsy, had removed a gallon of fluid from the abdomen by puncture.

Examination: The entire abdomen was bulged by a fluctuating resistance occupying the lower abdomen, mostly on the left side. The right flank and the abdomen above the umbilicus were tympanitic, while the left flank and the fluctuating tumor were dull.

Bimanual: The uterus was found to be retroverted and freely movable. No fluid or tumor nodules could be felt in the cul-de-sac. The lower pole of the tumor could not be reached from below.

Diagnosis: Cystic tumor of adnexa.

Advice: Extirpation of tumor by laparotomy which was postponed as the temperature was slightly elevated. On August 16, 1932, laparotomy was per-

formed under gas anesthesia, and some yellowish free fluid was found. The cyst was punctured and about three quarts of pseudomucinous, brownish fluid were removed. Upon delivery of the cyst, which arose from the left ovary, we found it twisted 180°, with solid parts, which made us very suspicious of malignancy. The tumor had nowhere grown through the wall of the cyst nor developed metastasis into the peritoneum. After the removal of the cyst, an oblong, three-finger thick, solid hematoma was seen in the vesico-uterine cavity, extending transversely. The hematoma consisted of firm, clotted blood and seemed to have perforated the peritoneum, so that it lacked the peritoneal covering in its whole length. As it was impossible to remove the firmly adherent clots, the hematoma was covered by a fold of peritoneum. The postoperative course was uneventful. As the histologic report was a pseudomucinous cyst adenocarcinoma, the patient was given a prophylactic deep x-ray treatment and discharged September 13, 1932.

Case 5. A young white girl, fifteen years of age, was admitted May 13, 1932. Menstruation had begun at the age of fourteen, and had been regular every twenty-eight days, with a duration of four to six days. During the past two or three months, there had been some irregularity. The last menstruation started on May 7. The family history was negative. The patient had always been healthy, and had had no previous operations.

Present complaint: In October, 1931, the patient noticed that her abdomen was gradually getting larger, but she felt perfectly well. The attending physician sent her to a hospital, where she was tapped and 2,300 c.c. of fluid, at first bloody, and then clear and yellowish in color, were removed from the abdomen. After the tapping, the patient had two attacks of diffuse abdominal pain, cramp-like in character, but not severe enough to require a hypodermic. The patient was sent home with the diagnosis of tuberculous peritonitis because of temperature, ranging four to eight-tenths above normal, and put on a high caloric diet. After having been at home for three months, almost continually bedridden, and having had several attacks of dull pain in the left lower quadrant, the patient was admitted once again because the abdomen had slowly but gradually become larger during the last two months. This time, 4,000 c.c. of clear fluid were removed. After repeated examinations (no bimanual examination was made) a movable cystic mass was found in the left lower quadrant, and the patient transferred to our department with the diagnosis of either a walled-off omental or mesenteric cyst of the tuberculous process, or tuberculosis of the adnexa.

Examination showed a perfectly built, and healthy looking, slender girl. The patient said that she had felt fine and had gained in weight and strength during the past three months. She was well developed, with firm breasts; subcutaneous tissue showed good turgor; musculature well developed; examination of chest negative; abdomen flat and soft; indistinct resistance arising from the true pelvis up to midway between the symphysis and the umbilicus; hymen intact.

Rectal examination revealed a slender cervix, uterus retroverted and movable. In front and on the left side of the uterus, a partially movable tumor the size of an orange could be felt, and another smaller tumor in front of the uterus was found. The parametrial tissue was free, and no nodules could be felt on the peritoneum of the Douglas pouch.

Diagnosis: Tumor of left, possibly both adnexa, which might be emptied by puncture. The absence of tuberculous manifestations and the general appearance of the patient, almost permitted the exclusion of tuberculosis.

Laparotomy: On May 20, 1932, under ethylene-ether anesthesia, a laparatomy was performed which revealed a collapsed, multilocular cyst of the left ovary with a gaping opening on its anterior wall. The cyst was removed and after an uneventful recovery the patient was discharged on the twelfth postoperative day.

It is hard to explain how the classic symptom in the differentiation of cystic tumor from ascites, that is, dullness on the height of the abdomen and tympany at the flanks, could entirely be overlooked. Even though we must admit the possibility of the presence of free fluid in addition to the cyst in Case 4, the cyst would certainly have been diagnosed, had a careful examination been made.

With regard to the last case, it must be taken into account that in the experience of the general practitioner, and, perhaps even more in that of the specialist in internal medicine, a large ovarian cyst is a rather rare occurrence in a child, while peritoneal tuberculosis is not uncommon. He will, therefore, ordinarily consider the latter condition first. This may explain, but does not excuse, an error that could easily have been avoided by scrupulous attention. Furthermore, this occurrence could have been averted by an adequate consideration of the constitutional type and excellent general condition of the patient.

FOREIGN PROTEINS AS AN AID IN OCULAR INFECTIONS*

EDWIN COBB, M.D., Marshalltown

During the last decade, the most outstanding contributions to the literature on ocular therapy, have been these articles on foreign protein injections.

Last summer, your chairman asked me to prepare a paper on this subject, and some time has been spent in looking up the literature, and using various proteins in private practice. At the outset

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I want to state, as the title reads, that foreign protein injections should be considered as an aid in ocular therapeutics, and not a "cure-all."

Schmidt and Saxl[1], of Prague, in 1915, during the war, being unable to obtain serums, resorted to the use of intramuscular injections of boiled milk with remarkable success. Gaston[2] quotes Bargy[3], who used milk injections in three thousand cases, and reported them as apparently most beneficial in acute inflammatory reactions of the anterior segment, but stated that the treatment should not be accepted as a therapeutic panacea for all cases. Richman and Amat[4] reported similar results. Linder[5] reported good results in gonococcic blennorrhea, and stated that in some cases no gonococci could be found in the conjunctiva, thirty-six to forty-eight hours after the milk injection.

Protein therapy is composed of the specific and nonspecific types. Among the former are the bacterial vaccines, tuberculin, uveal pigment and lens protein, while in the latter are found the more commonly used types, namely, antidiphtheritic serum, milk, typhoid and gonorrheal vaccines.

From Scarlett[6] we learn that many theories are advanced concerning the mode of action of these proteins, chief among which are:

1. All cells of the body, nervous, muscular, glandular, and osseous, are stimulated to produce antibodies which will combat invading infection and place the body in a state of defense, locally and generally.
2. A reduction in virulence of the infection.
3. An increased permeability of the capillaries with an accompanying lymphgogic action.

In all cases, every source of infection, such as bad teeth, diseased tonsils, and infected sinuses, must be eradicated.

In order to cause the formation of antibodies, there must be produced in the body the necessary febrile reactions, such as chills, temperature and leukocytosis. These reactions are believed to promote the mobilization of specific and nonspecific immune bodies. It is now thought by many, that the initial chill of an acute infection is a purposeful reaction.

One of my recollections from interne days, is that when a patient underwent a radical mastoid operation and subsequently developed erysipelas, the radical mastoid cavity, in those patients surviving, was healed very much better than in the ordinary cases.

Many commercial preparations are now on the market under various trade names, but most of them cause no systemic reaction and therefore, in the light of recent studies, only partially aid the body in its defense against an invading organism, or help in overcoming one already present.

Szily[7], after experimental investigation of protein therapy on the eye, concluded that there was a "definite histological inflammation demonstrated in the ciliary body and in view of the importance of the ciliary body on the nutrition of the eye, this appears very important. The inflammatory reactions resulted in a dilatation of the vessels, an increase of lymphocytes, diffuse cellular infiltration and the formation of circumscribed clumps of lymphocytes."

The clinical effects brought about are a general and local reaction. The general reaction consists of a period of discomfort; slight chill; sweating; rise in temperature, pulse and blood pressure; and in some cases, nausea and headache. The local reaction is one of attempt at true tissue repair, an increase of leukocytes, glandular action, a permeability of the capillaries and a true lymphogogic action. Berens and Losey[8], after experimenting in a great number of cases with various vaccines, concluded that the best results were obtained by those vaccines containing bacteria to which the patient is hypersensitive; careful introdermal tests were made in each case.

Some advocate these injections previous to surgical intervention; personally, I prefer them after operation. Boiled milk is given in some cases following a cataract extraction in individuals of low vitality, and in all cases of double extraction.

Verhoeff[9] of Boston, using large doses of foreign protein, reported good results in sympathetic ophthalmitis and interstitial keratitis.

In examining the benefits of milk injection, it is thought that the febrile reaction is due to:

1. Dead bacterial proteins.
2. Soluble substances produced by the action of bacteria in the milk.

It is important that the bacterial count of the milk be high, since sterile milk has no therapeutic value. It has been demonstrated by Wilde[5] and others, that these protein injections are useful only in the acute infections, and those confined to the anterior segment; that is, from the ciliary body forward. The increased blood supply of this portion of the globe probably accounts for this action. The vitreous body has no active circulation and foreign protein injections make no changes in infections of this body. Organisms most susceptible to the use of milk are staphylococcus aureus, pneumococcus, and especially the gonococcus. Our experience has shown that very little effect is made on streptococcus infections. This has been the general result reported by most observers.

The most important proteins used today are typhoid vaccine, antidiphtheritic serum, and boiled milk. Various oculists have leaned to some one

protein. Typhoid vaccine and antidiphtheritic serum produce quicker reactions than milk; hence, in cases requiring immediate reactions, it would be advisable to use the two former proteins in place of milk.

Burch[10] preferred triple typhoid, starting with two mm. in adults, a proportionate dosage in children, and was guided by the leukocytosis. He found that one-half million of triple typhoid would about double the leukocyte count, reaching its peak in eight hours after injection; he preferred not to repeat the injection until the leukocyte count approached normality. Ben Witt Key[11], on the other hand, favored antidiphtheritic serum, and has contributed many articles to the literature on the subject. In a series of ninety-three cases upon which he used antidiphtheritic serum in place of milk, he stated that this serum offered the best form of protein therapy, and further said that he felt sure he had proved conclusively the authenticity of the remarkable results obtained in combating pneumococcic and staphylococcic infection in the refractive media of the eye. In 1922, James Patton[12], in a paper before this Society, reporting on a questionnaire sent to twenty prominent eye men, found that milk was the protein of choice.

Boiled milk is the mildest protein and varies in reaction in proportion to the bacterial count. To obtain this necessary high bacterial count, pasteurized milk must not be used. Simply pour whole milk into a flask, allow to stand on a warm radiator for a few hours, and then bring to a boil for three minutes. The dose usually given varies from two to twelve c.c., depending upon the age of the patient. It is given intramuscularly, deep in the buttocks, avoiding the veins, and the usual care is taken to avoid skin abscesses. The injection can be repeated on the third or fourth day, depending on the leukocytosis. The maximum reaction in boiled milk occurs in four to six hours. Melvin Black[13] suggested that the family physician administer milk injections early in gonorrheal ophthalmia cases.

Beigelman[14] used Besredka's desensitization method; that is, injecting a very small portion of the protein, and noting the effect; if no untoward symptoms arise, then the full protein dose is given. It is advisable to hospitalize these patients. Ling[15] stated that the peripheral leukocytosis is greatest after milk injection, and next after typhoid vaccine.

The antidiphtheritic serum is also given according to age. The bacterial vaccines, usually typhoid, are preferably administered intravenously; the principal objection to the latter is the violent headache which sometimes occurs. I have found that certain cases will not respond to one protein, hence, one must use another protein to obtain the desired reaction.

The clinical result noted following the use of protein therapy is a prompt relief from pain, with an accompanying decrease in the inflammatory reaction. Barker and Nelson[16], after using milk injections in many cases, concluded that the milk reaction was not a milk reaction at all, but that it depended on the milk bacteria, and the products of their metabolism, and not on the milk protein.

The best effects of the proteins were noted in penetrating infected wounds of the cornea. Practically the only other treatment given was atropine, dionin, hot fomentations, and infra-red therapy. Foreign protein injections were most advantageously used in the acute ocular infections, confined to the anterior segment; that is, iritis and keratitis. The pain in the acute iritis was relieved, and it was noted that the milk injections assisted the local therapy in producing the proper dilatation of the pupil.

Mithoefer[17] seemed enthusiastic over a biologic product called "Omnadin," which is composed of proteins of non-pathogenic bacteria, the lipoids of bile and fats. There was no reaction following the injection, but in spite of this, he felt that the patients show marked improvement in twenty-four hours. In using foreign protein therapy, he stated that we not only stimulate the cells of the body, but more especially the endocrine glands, and in this way, bring out the defensive forces of the body.

Patton[18], in discussing the use of foreign proteins in the treatment of general and ocular inflammations, stated that it was his custom to use milk for the average cases of ocular inflammations, reserving the vaccines or serums for the more serious conditions, or for those which did not respond to milk. No doubt, many of the poor results obtained in milk injections were from the use of pasteurized milk.

A number of our prominent eye men have reported remarkable success in gonorrheal ophthalmia, by the use of injections of boiled milk.

In ulcer sepens, and also those later cases of hypopyon keratitis, I have noted the rapidity with which the anterior chamber clears. Probably the most outstanding results of the foreign protein injections are to be found in penetrating wounds of the cornea, involving either the anterior or posterior chamber. Good results in the treatment of iritis were obtained in those cases seen early, especially when the present attack was the first.

Benedict[19] was of the opinion that in the treatment of scleritis he received the best results from milk injections. Scleritis, as you know, is a most annoying condition; it responds well, then occurs again and again during life. While we always

suspect a tuberculous action, yet these cases are at times made worse by tuberculin injections. Benedict also reported good results with repeated milk injections in several cases, when other measures had failed.

Recently, a baby, two years of age, with corneal ulceration, photophobia and blepharospasm, responded well to two c.c. milk injections, in addition to the regular local treatment. Wilder[20], in his work at the Presbyterian Hospital, Chicago, with cases of uveitis and sympathetic ophthalmia, has stated a preference for typhoid vaccine, feeling that he can graduate the dose of that vaccine to a better advantage than he can milk injections.

Shorney[21] has recommended the use of foreign proteins, particularly milk, in the following cases: gonorrheal ophthalmia, penetrating wounds of the globe, infections of the iris, ciliary body, and allied conditions; wound infections after cataract extraction.

I wish to report a case of multiple punctate keratitis, accompanied by an acute choroiditis, with many floating opacities. A blood Wassermann test was negative. The local treatment consisted of atropine, dionin, hot fomentations, and injections of sodium salicylate and sodium iodide administered intravenously. In this case, various foreign proteins were used; milk, omnadin and antidiphtheritic serum. Much to my surprise, the vision gradually improved, and was fully restored in a few months.

Nonspecific protein therapy should be used when the cells are still able to respond to stimulation, and not when the cells are worn out by a long drawn out disease. If a system is exhausted by disease, age, or malnutrition, to such a degree that no active response is possible, then stimuli are likely to be harmful rather than beneficial. If a deep corneal ulcer is present, and little tissue remains, the reaction is likely to cause a prompt perforation. Benedict stated that "a chronic iritis, with a narrow pupil, and posterior adhesions, can be made worse by protein injections."

Beigelman noticed the anaphylactic reactions of proteins and cited an instance in which milk injections were given for an iritis case, where at a three months' previous attack, vaccine had been administered. Adrenalin is given to combat the shock in these cases, since it causes a rapid rise in the blood pressure, relaxes the bronchial muscles, and delays absorption. He further quoted LeRoux and Morax as long ago observing the recurrences of herpes caused by the administration of typhoid vaccine. This winter, I had a very trying case of corneal herpes, involving the entire half of the head, in which milk injections promptly caused an exaggeration of all the symptoms.

O'Brien[22], of the State University Hospital, stated, "We use foreign proteins a great deal, especially in gonorrheal ophthalmia and in cases of acute iridocyclitis. As a rule, we employ typhoid vaccine, except in infants, where we use milk. I have no particular pet theory regarding their use, but do believe they are extremely beneficial in certain cases."

Quoting Suker[23], of Chicago, "In all penetrating foreign body wounds of the eye, I immediately give (pro rata) 8-10 c.c. of three minute boiled milk; repeat again as soon as temperature is normal, usually twenty-four to thirty-six hours after first injection. Usually employ four or five such injections, in three or four day intervals. Second, use the milk always in gonorrheal ophthalmia. Third, in tuberculous lesions, we use tebeprotin or the old Koch's tuberculin. Fourth, have used the diphtheria antitoxin, typhoid and antitetanic serum as an adjunct to the milk and tebeprotin."

Gifford[24], of Chicago, has written, "Where I wish to be sure of a good reaction in adults, I use mixed typhoid vaccines intravenously, increasing the dose from 30 million to 60 or 70 million organisms, injections being given with two free days between. In children, especially infants with ophthalmia neonatorum, boiled milk gives a good reaction, 1 to 2 c.c. being used intramuscularly. This is sometimes used also in adults, using 8 to 15 c.c. at the same intervals."

Protein injections should not be given the diabetic or alcoholic patient, or to the aged; nor in cases of asthma and hay fever, or pregnancy. Key[25] warned against the use of antidiphtheritic serum in cases of previous anaphylactic reaction, previous attack of diphtheria, or status lymphaticus.

Dr. Harry Gradle[26], after trying a large number, mentioned the two following forms of foreign proteins, as having given the best results: "(A) In acute conditions where I desire a rapid and a febrile reaction, I use intravenous typhoid vaccine, from 2½ to 15 million for the first dose, and double the dose every forty-eight hours. With this, I believe that the dosage, the reaction, and the leukocytosis can be controlled more accurately than with any other shock-producing foreign protein. (B) For low grade, or chronic conditions, where the violent attack is not necessary, I give either omnadin or yatren casein intramuscularly. The effects of this are not as rapid or striking, but a definite value can be attributed to such therapy."

Dr. deSchweinitz[27], in a personal communication, stated, "I have used foreign proteins a great deal, and my best results have been with whole boiled milk, which I think is definitely preferable to aolan. In certain infections, for example, hypopyon ker-

atitis and other types of infective ulcers. I have used with great satisfaction as a foreign protein, diphtheria antitoxin."

Allen C. Woods[28], in a recent article, drew these conclusions:

"While nonspecific therapy is indeed one of the most valuable therapeutic weapons we have, it is nevertheless specialized therapy. The age and condition of the patient and the duration of the disease should be carefully considered before a protein is chosen. In the case of debilitated patients, or when a mild reaction is desired, milk seems to be the protein of choice. In the event of a more certain reaction desired, antidiphtheritic serum may well be used, after preliminary tests are made to determine the question of hypersensitivity. If the local disease is advanced to a considerable degree, a much sharper stimulus will probably be needed to evoke a response from a cell fatigued by disease. If the patient is a good clinical risk, killed bacilli may be used intravenously; but nonspecific protein therapy should always be considered specialized, and never routine therapy, and no hard and fast rule be laid down. Our choice of protein and dosage should be governed by the reaction we desire to produce, and this should be controlled by the condition of the inflammatory lesion and the general condition of the patient."

CONCLUSIONS

1. Foreign protein injections are not a "cure-all," but are to be considered as an aid in ocular therapeutics.

2. Among the contra-indications are, pregnancy, diabetes, alcoholism, senility, asthma, and hay fever.

3. Protein therapy should be administered early in an acute ocular infection, when the cells will respond to stimulation.

4. The leukocyte count should be taken before and after the desired reaction. The protein treatment can be repeated after the leukocyte count approaches normality.

5. Milk is advised in the milder cases, while typhoid vaccine and diphtheritic antitoxin are reserved for the more pronounced reactions.

6. Massive doses of diphtheritic antitoxin can be administered daily, from fifteen to twenty days, without harm.

7. Boiled milk is a safe protein to use; very few anaphylactic reactions reported.

8. Age is not a factor in the treatment, other than the dosage given.

9. Foci of infection must be removed to obtain the maximum results.

10. Foreign protein injections apparently show the best results in penetrating wounds of the cornea, hypopyon keratitis, and acute infections limited to the anterior segment of the globe.

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Discussion

Dr. E. P. Weih, Clinton: Dr. Cobb has given us a very excellent paper, and I wish to compliment him on it. He has left very little for us to say. However, I wish to emphasize a few of the points which he brought out.

I have had better results with the use of intravenous typhoid vaccine, than with the other proteins. Various factors influence the reaction; the kind and degree of illness, the method of administration, the type and freshness of the vaccine, and the response of the patient.

The reactions to typhoid vaccine are basically the same as the reactions to other foreign proteins. When the substance is given intramuscularly, reactions are minimized and delayed; when given intravenously, they are sharper and more prompt. Fresh vaccine gives a more prompt reaction than old vac-

cine, and should be given in smaller doses. No set schedule of dose or time should be used. Some advise administration of foreign protein not oftener than once a week, others every second day. I usually give it every third day about 5:00 p. m., so that the patient has his reaction while asleep; and I use as an initial dose, twenty-five million. Subsequent doses are fifty million, seventy-five million, one hundred million, one hundred fifty million, and so on. When given over a long period of time, there should be an occasional intermission of several weeks to prevent marked loss of weight. Injections should be discontinued when they fail to produce definite relief. Dosage seems to be of variable significance in the production of undesirable reactions. Severe reactions have occurred after very small doses, administered intramuscularly, as well as intravenously.

Contra-indications are:

(1) Marked arteriosclerosis, peripheral or renal.

(2) Uncompensated cardiac, renal or vasomotor disease.

(3) Chronic infections of long duration with dissemination to several sites.

(4) State of exhaustion, following prolonged illness.

(5) Pulmonary tuberculosis, active or quiescent.

(6) Conditions in which hemorrhage may occur, such as hemophilia.

(7) If hemorrhage has followed when given fourteen days following operation, such as a tonsillectomy.

(8) Marked hypertension.

(9) Chronic alcoholism, for fear of delirium tremens.

(10) States of grave nervous instability, active or quiescent, such as hyperthyroidism, epilepsy, and certain psychopathic conditions.

(11) Definite hypersensitivity, history of serum sickness, urticaria.

(12) Pregnancy.

(13) Rheumatism with acute or decompensated carditis.

(14) Diabetic acidosis.

To prevent untoward reactions we must be familiar with the substance used; we should use moderate dosages; we should make a careful selection of patients; see that the patient is given the best of care during the reaction; and continue the treatment, only if the reaction is well borne, and satisfactory relief is obtained.

We hospitalize all patients during the period of reaction. To lessen the discomforts of the reaction, we use hot water bottles and mild analgesics. Patient should be given fluids during the treatment. If vascular accidents occur, the patient should be kept in bed and warmth applied to his body. Dyspnea and cyanosis can be relieved by injecting adrenalin, 3/4 c.c. or 1/100 grain atropin sulphate. Intravenous injections of diuretics will relieve renal insufficiency, should it occur.

PERNICIOUS ANEMIA

David Mitchell Blum, M.D., Des Moines

Combe, in 1822, first described pernicious anemia, but could ascribe no cause. Elliotson thought it might be a gravitation or emotional effect or a change to "white bloodedness." Addison suggested fatty degeneration as a cause. Fenwick believed the degenerative changes in the gastric mucosa were significant. Perroud considered fatty degeneration of the liver a causative factor. Biermer attributed it to bad hygienic conditions or diarrhea, ascribing ulcerative colitis to the same etiology. McKenzie thought neurosis was a definite factor. Cohnheim, Ehrlich, and many early continental physicians regarded the bone marrow changes as the prime cause, working on the idea that blood destruction of abnormal degree was the means of blood depletion, and that the marrow changes were regenerative and compensatory.

Pepper, Cohnheim, Osler and Gardner emphasized the abnormal type of blood formation and noted the phagocytosis of red cells in this tissue. Ehrlich was greatly interested in the presence of megaloblasts in the marrow and circulating blood, and described the marrow changes as degenerative. Kennicutt also considered the gastric atrophy as extremely significant. Hunter especially emphasized the clinical signs and symptoms of the digestive system and hemosiderosis of the liver. He thought the etiology lay in an abnormal blood destruction in the portal area produced by a specific micro-organism in the lumen of the gut being absorbed by the portal circulation. Muir, in 1894, made a minute study of the bone marrow, which he interpreted as an extensive and energetic regeneration undertaken in response to a severe bodily demand for blood. Mott believed that pernicious anemia was due to the circulation being presented with inadequately formed corpuscles. The period of 1852 to 1890 was influenced by the work of Fenwick, Flint, Barclay, Hunter and others, who placed emphasis on the atrophy of the gastric mucosa, the specific glossitis, and the familiar train of gastro-intestinal symptoms. Pepper, in 1875, maintained that the condition was a primary disorder of blood formation. Whipple thought it was improper or inadequate formation of the stroma of red blood cells. From 1884 to the present time, the nervous symptoms have been studied and clarified. In the early nineties the disease was regarded as chiefly a blood disease. The only other fact added to our knowledge of this condition in the past century has been an empirical line of treatment.

A typical patient might give a logical anamnesis

of many years' duration. Such a patient would probably be a man, thirty-six years of age or over; if under thirty-six, the patient would probably be a woman. Children have been said to have this condition. Natives of northern Europe, the British Isles, or North America are most often afflicted; natives of Brazil or China, hardly ever; and a full-blooded negro, never. Iowa has the highest ratio of any state in the Union, according to available statistics.

The typical pernicious anemia patient has a short, broad face; a long mandibular angle; a short nose; a short but deep, wide chest; long thin ears; high umbilicus and long abdomen; a tendency to eunuchoid habitus. He is of medium height, or taller; may be prematurely gray; has definite feministic tendencies, and in all ways tends to approach the acromegalic in type.

He may have noticed fatigability, weakness, faintness, headache, dizziness, anorexia and other digestive disturbances for years. Palpitation or dyspnea may have been noted for some time, or numbness and tingling in the hands and feet may be the first thing to attract his attention. As his condition progresses, he may be aware of a peculiar yellowish tinge to his skin, and with this his digestive symptoms may become worse with marked attacks of diarrhea associated with nausea and vomiting, so that eating may be almost an impossibility. Associated with epigastric discomfort, is fullness and gas. The diarrhea may be severe, protracted and exhausting, characterized by crises of sharp, colicky abdominal pain that may even suggest an early peritonitis, or resemble the gastric crises of tabes.

He will probably complain of a red, hot tongue, which at first may occur only occasionally, and then become progressively and steadily worse, especially after any kind of acid has been taken in his mouth.

There may be cerebral disturbances such as headache, irritability, lack of power of concentration, mental dullness, or drowsiness, and in the final stages, delirium and coma. The patient may have noticed spasticity of the muscles of the legs, with weakness and paralysis or ataxia. As a matter of fact, these nervous symptoms may precede all other symptoms by months and even years. There may develop anesthesia and loss of sphincter control. Paresthesia is usually not associated with pains. The ataxia may be noticed in the arms before the legs. There may be a "tabetic" pseudo-athetosis of the fingers.

The skin may be more or less pigmented and it may appear as though we were dealing with a case of Addison's disease. There may be others in the patient's family who have had chronic stomach trouble and have been told that they have no gastric juice.

Palmer Howard, Klein (1891), Byron Bramwell, Caccini, Schauman (1894-1917), Gulland, Cabot, Osler (1914), Gilbert and Weil, Patek, Willson, Andree Bartlett, Roth, G. R. Minot, Piney, Matthes, Levine and Ladd, Meulengracht (1925), Gram, v. Decastello, Mustelin, Gilford, Hurst and Barker (1926), have described the hereditary features.

The patient will probably tell us he has had one to six remissions over a period varying from a few months to six or ten years.

On examining the patient, we are particularly struck with the color of the skin, which may have a grapefruit tint, although there may be only a marked pallor, and as the condition progresses, there may be a deep jaundice with some brown pigmentation. Retinal petechiae may also be noted. The nutrition is usually well preserved and the patient does not have the appearance of having lost much weight, although there is usually a moderate loss of weight. The tongue may be abnormally clean, with a dry, smooth, polished appearance and an atrophy of the papilla, and oral sepsis and pyorrhea may be present, but more characteristic are yellow-stained firm, wide teeth.

The heart is usually dilated somewhat, at times unusually so, and there may be systolic precordial murmurs which are intense. The sounds are not altered and diastolic murmurs are rare. The blood pressure is low. The spleen may be larger than normal and the liver is often slightly enlarged and hard.

The deep reflexes are often absent, the vibration and position senses frequently being impaired or completely lost. There may be hypotonia and limp paresis. There may be positive Babinski signs and increased reflexes. The sensory disturbances may be as marked as in a myelitis and bed sores may appear early and be slow in healing. There will probably be no pupillary changes, and there may be depressions, delusions and optic atrophy. During remissions there is no change in the nervous symptoms. Similar changes are also found in poisoning with lead, arsenic, ergot, chick peas, alcohol, or tea, and in pellegra, diabetes, leukemia, diphtheria, Addison's disease of the suprarenal capsule, tuberculosis, syphilis, typhoid, carcinoma, senility, chronic jaundice, malaria, influenza, scarlet fever, tetanus, and the anemias of pregnancy.

As we follow the patient through the laboratory, we find, upon a general x-ray examination, no evidence of organic lesions. Characteristically, there is no hydrochloric acid in the stomach after a fractional test and even after stimulation with

histamine, and during the remissions. If we see the patient early enough this anacidity may precede the other symptoms by years and other members of the family may also be observed to have anacidity. All people with anacidity, however, do not develop this clinical syndrome, which is also characteristically observed in chronic cholecystitis, alcoholic gastritis, following gastro-enterostomy, the anemias of pregnancy, achromic anemia, Dibothryocephalus latus, exophthalmic goiter, arthritis deformans, appendicitis, and malignancy of the stomach. It may occur without association with any disease.

Von Noorden, Einhorn, Stewart, Growitz, Martius and others called attention to the anacidity (1890-1897).

The urine shows no abnormalities other than pigment changes, moderate albuminuria and cylindruria. There is no evidence of any carbohydrate abnormality. Pancreatic function is normal in both enzyme secretion and alkaline fluid secretion. There is a depletion of blood cholesterol and usually a high ratio of unsaturated fatty acids. There is no evidence of disturbed metabolism of simple fats; although a tendency to a negative nitrogen balance may be noticed and amino-acids are increased in the blood. Blood creatinin is increased. There is a marked disturbance of iron metabolism and siderosis is present with iron pigment found in the liver, spleen and kidneys. There is a tendency to chloride retention. The basic metabolic rate shows that the energy is determined by two factors: (1) a positive stimulation connected with increased blood production, and (2) a retarding influence due to the tendency to storage and infiltration of fat.

The blood shows no characteristic fixation tests, such as in syphilis. Characteristic is the anemia with a reduction in all cells and hemoglobin so that the color index is above 1, which means that the average cell has more than the usual amount of hemoglobin. The size of the red cell is far above average, differing from secondary anemias with small red cells. There is anisocytosis, poikilocytosis, and punctate basophilia particularly during recovery from a relapse. In the blast crisis, when nucleated red cells occur in high percentage, they are not of good prognostic significance, although when occurring in less numbers, especially in conjunction with increased numbers of reticulocytes and polychromatic corpuscles, they are of good prognostic significance. Polychromasia is of varying degree but is commonly seen. Nucleated red cells appear at some time during the disease but are not pathognomonic of the disease. Megaloblasts may be more numerous than normoblasts.

There is a decrease in the leukocytes to a relative leukopenia and the neutrophils are lacking so that there is a relative lymphocytosis. The neutrophils present may resemble metamyelocytes; some are larger than normal and have an excessive number of nuclear lobes. The shift is to the right. Eosinophils are reduced in number and basophils usually disappear entirely. Monocytes are diminished.

The typical blood picture of pernicious anemia shows: some anemia with a color index above unity; polychromasia, anisocytosis, poikilocytosis, and punctate basophilia; leukopenia, the lymphocytes forming about fifty per cent of the leukocytes; monocytes and eosinophils reduced; normoblasts very scanty and megaloblasts difficult to find.

The blood picture during gradual recovery from a relapse shows: much polychromasia, poikilocytosis, anisocytosis and punctate basophilia; leukocytes rising and lymphocytes relatively decreasing.

The blood picture during rapid recovery from a relapse reveals: considerable polychromasia, poikilocytosis, anisocytosis and punctate basophilia; many nucleated red cells (mainly normoblasts); transient leukocytosis; rapid reduction of relative lymphocytosis.

The blood picture in very severe cases is characterized by: little polychromasia, poikilocytosis, anisocytosis and punctate basophilia; nucleated red cells of both types very scanty, but with normoblasts often appearing in large numbers just before death; extreme leukopenia and great relative lymphocytosis; eosinophils and monocytes greatly reduced or entirely absent.

There may be a persistent reduction in the blood platelets which may rise to normal during remissions; the blood viscosity is lowered; the coagulation time is prolonged. The red cells may fall below two million and even as low as two hundred thousand, and this condition shows a loss of blood cells out of all proportion to symptoms. Indeed a patient may come in with a marked loss of red cells and complain only of dyspnea upon exertion, and fatigability with flatulency.

The blood itself may look pale and watery. The red count is frequently higher in the arterial system than in the venous, but this often disappears during remission, when the blood count may be higher in the venous than in the arterial system. The blood serum may appear yellow from bilirubin and gives a positive indirect Van den Bergh reaction and a high icterus index.

The following pathologic changes are seen:

There is a deposit of iron-containing pigment in the liver, spleen and kidney. The bones have an extension of the red marrow and marked erythrocytoblastic activity. Nucleated red cells

may make up twenty per cent of the cells present, besides megaloblasts, erythroblasts and normoblasts. The non-nucleated red cells show the same characteristic changes as in the circulation. The clasmatocytes lining the blood sinuses may have phagocytosed red cells and may contain hemoglobin. The marrow shows very little hemosiderosis. Eosinophils and non-granular basophilia cells are plentiful.

The spleen histologically represents a combined picture of sclerosis, siderosis and phagocytic activity.

The liver shows more siderosis, and fatty degeneration may be moderate to extreme, affecting chiefly the center of the lobules. Glycogenic and ureagenetic functions are normal; reactions from Bauer's galactose and Strauss' levulose tests are also normal. The sulphoconjugation test indicates a deficiency in detoxication function.

The tongue may be fiery red, have a fissured dorsum, and at times show vesicles containing serum. Later the organ shows anemia and has the appearance of a combined mucosal and muscular atrophy with some round cell infiltration and fatty connective tissue; Panton, Maitland-Jones and Riddoch found it in twenty-five per cent of the cases. There may be a diffuse inflammation of the stomach wall with destruction and atrophy of the glands. There are no characteristic intestinal lesions. The nervous system shows posterior and lateral column degeneration and may show definite cerebral degeneration in proportion to the cord changes. The changes are in the myelin sheaths of long nerves and long tracts. Eighty-five per cent of the patients with pernicious anemia are said to have some kind of central nervous system changes. Lichtenstern, Lichtheim, Putnam, Dana, Von Noorden, Eisenlohr, Minnich, Russel, Batten, Collier, Dejerines, Crouzon, Jumentie, Cadwallader, Schaller, Woltman, Hamilton, Nixon, Piney and Blankenhorn have established this pathology. Fatty changes especially are seen in the heart muscle and pernicious anemia is practically the only disease that causes such marked myocardial fatty changes.

No reason for these various changes is known at this time. Some of the theories advanced are: (1) overactive reticulo-endothelial system; (2) avitaminosis of the "a" substance, particularly; (3) loss of a "potent substance" in the diet; (4) a hormone deficiency. Nearly every type of bacterium isolated from the stools and gastro-intestinal tract has been blamed from time to time, such as bacillus coli, streptococcus longus, bacillus welchii (aerogenes capsulatus and per fringens), Monilia psilosis and Balantidium coli.

The condition has to be differentiated from secondary microcytic anemia such as might follow intestinal parasites, pregnancy, Balantidium coli infection, aleukemic leukemia, malignant metastases to bone marrow, myxedema, cancer, chronic infections, chronic hemorrhages and hypochromic anemia of middle age. Dibothryocephalus latus may simulate pernicious anemia. Acute aplastic anemia occurs in younger individuals, has a more rapid course without remissions, and shows more fatty changes in the bone marrow. At times there is a severe anemia during pregnancy that may resemble pernicious anemia. Sprue, syphilis and malaria may cause an anemia, the former presenting symptoms similar to pernicious anemia. Severe anemias of childhood, and the pseudoleukemia infantum, may give some difficulty but they have a leukocytosis and higher platelet counts, although pernicious anemia has been described in children under one year. The leukemias may be very confusing. One must also exclude all causes of jaundice, gastro-intestinal tract diseases, central nervous system diseases and all conditions causing a sore tongue.

The time to make the diagnosis is not after all these changes are present, but in a middle aged person who comes in complaining of a sore tongue, digestive disturbances and diarrhea or constipation. The blood smear may or may not show changes aside from a tendency of the red cells to be larger than normal. Gastric analysis will probably show an achylia.

TREATMENT

The treatment of the condition is difficult because we do not know the cause, but in short, it falls under two or three main divisions. Iron definitely does no good in a case of true pernicious anemia. The English have recently reported an improvement in the central nervous system symptoms when iron is given in the form of Blaud's mass, 150 grains each day. Arsenic is of some value given either orally, hypodermically or intravenously. Dilute hydrochloric acid with the meals, improves digestion, but the dose should be several times larger than that which we are accustomed to prescribing. If the red count is greatly decreased, several transfusions of whole blood, probably eight to ten ounces at a time, will give an initial kick to a remission when other recognized treatment is given, but transfusion in itself is not a substitute for other treatment. Splenectomy is not indicated and x-ray and radium therapy is of no value. Focal infections and any conditions of the body or poor environment which might interfere with the well being of an individual, should be contra-indicated. The patient should dress warmly, get a great deal of exercise in the

open, and be in the sunlight as much as possible. Climate has no influence on the condition. Ultraviolet light, *per se,* has been of no definite value.

The rest of the treatment resolves itself into two factors: (1) the foods known to have an active anemia-preventing agent, and (2) those rich in vitamins. Of the former, liver, stomach and kidney are probably the most important, with liver and stomach standing highest. It is said that the idea of using liver in pernicious anemia came from observation of the empirical practices of South African natives, who always ate the raw livers of killed animals because they found them of value in tropical sprue. Liver has been found to have a high anemia-preventing factor, whether it is of hog or horse, veal or beef, sheep or lamb, chicken or other fowl. Considerable amount of research work has failed to show what action liver or stomach has in the treatment of pernicious anemia. Various fractions of the liver have been tried. One set of workers has been able to remove all the fat, carbohydrate and most of the protein, leaving a clear, crystalline product, freely soluble in water and alcohol. It is related to one of the amino-acids and probably to one of the nucleotide salts. One fraction of the liver has been given intramuscularly and rectally, with success. Large doses have been given once or twice a week through a duodenal tube, and have been found to be as effective as smaller doses by mouth.

The fractions are as follows:

Raw minced liver brought to pH 9.0

Insoluble residue (A)	Water soluble extract brought to pH 5.0
Acid precipitate Protein (B)	Water soluble extract heated to 70 degrees
Heat coagulable Protein (C)	Water soluble extract (D) extracted with ether
Ether soluble extract (E)	Water soluble extract precipitated with alcohol
Alcohol soluble extract (F)	Water soluble extract (G) dialyzed
Dialyzed extract (H)	Dialysate (I) with silicic acid gel
Extract absorbed by silica gel (J)	Filtrate (K) extracted with (N) butyl alcohol
Residue of (N) butyl alcohol extract (M)	Extract precipitated (L) with basic lead acetate
Lead precipitate extract (N)	Filtrate (O) precipitated with phosphotungstic acid
Precipitate from phosphotungstates (Q)	Precipitate (P) phosphotungstates treated with 90% acetone
Acetone soluble phosphotungstates (S)	Acetone insoluble phosphotungstates (R)

Whipple and Bobescheit-Robbins have arranged the following four groups of anemia-preventing factors:

(1) *Least favorable for blood regeneration:* grains, breadstuffs, common vegetables, some fruits, all fish, including fish liver, and dairy products.

(2) *Larger quantities of anemia-preventing factors, but insufficient to prove of immediate value:* leafy vegetables, skeletal muscle of beef, pork, veal, spleen, pancreas and brain.

(3) *Greater amounts of anemia-preventing factors than those in second classification, and useful in treating pernicious anemia:* apples, prunes, apricots and peaches.

(4) *Most potent in hemoglobin regeneration:* liver (beef, pig, sheep, calf, chicken), hog stomach, kidney, and chicken gizzards; the kidney of the sheep, calf or pig.

A diet for treating pernicious anemia, therefore, should be rich in foods from groups three and four. Liver also has other factors besides the anemia-preventing substance. It is rich in iron. It is rich in proteins and these patients tend to have a negative nitrogen balance. It is also rich in vitamins of both the fat soluble and water soluble variety and is an organ of detoxication.

The following treatment suggested by Minot and Murphy gives rapid clinical improvement:

(1) From 120 to 240 gm. and sometimes more, of cooked calf or beef liver, or an equal quantity of lamb's kidney

(2) 120 gm. or more of beef or mutton muscle meat

(3) Not less than 300 gm. of vegetables, containing from 1 to 10 per cent carbohydrates, especially lettuce and spinach

(4) From 250 to 500 gm. of fruit, especially peaches, apricots, strawberries, pineapple, oranges and grapefruit

(5) About 40 gm. of fat from butter and cream (animal fats and oils are excluded as far as possible)

(6) One egg and 240 gm. of milk, if desired

In addition to the above mentioned foods, it is necessary to allow the patient to have breads, especially dry and crusty, potato and cereal, in order to allow a daily intake of 1,000 to 3,000 calories, composed of 340 gm. of carbohydrates, 135 gm. of proteins, and not more than 70 gm. of fat. Grossly sweet foods are not given, but sugar is allowed sparingly. This diet has about .03 iron and one gm. of purine derivatives.

The first thing noticed is a marked increase in the appetite. Fever, sore tongue, digestive disturbances, pallor, edema and weakness are relieved in four to six weeks. There is a marked increase in muscle strength. The tongue may become normal, the patient gain in weight, his emotional and mental condition improve, but the anacidity and the neurologic signs remain unaffected and impaired. The hemoglobin content of the blood rises slower than the relative increase of red cells. The color index reaches unity or less. The skin may assume an abnormal redness before the blood returns to normal. The red cells tend to become more normal in size and shape. The reticulocytes rise to 5 or 6 per cent in a few days sometimes reaching a maximum peak of 30 to 35 per cent.

When 150 to 350 gms. of liver or kidney are fed each day, the onset of the reticulocytic reaction may be as early as the third day and rarely as late as the seventh, with the peak between the sixth and ninth day. If raw liver is fed, 30 to 40 per cent of the granulocytes may be eosinophils. The reticulocytes return to normal in about ten days, rarely less than seven or more than thirteen, and almost vanish as the count becomes normal. Infection may inhibit this response.

Along with the decrease of the reticulocytes, the blood platelets and the bone marrow white cells tend to rise, and distinctly immature types of bone marrow cells and blood platelets may appear in the blood. When the red cell count is about three million, liver feeding allows no detectable response of the reticulocytes, or their absolute increase is relatively small compared to what it is when the red cell count is much lower. The occurrence of a delayed, through prolonged response of the reticulocytes may be the result of repeated transfusions.

Even a normal person may show response to liver, the red count rising as high as 6,500,000, and the hemoglobin to 115 per cent, with signs of polycythemia; acrocyanosis, headache and epistaxis.

At the end of the first week of a liver diet, the bile pigments in the blood begin to diminish and the icterus index begins to fall to reach normal, the urobilin disappears from the urine, and the patient loses the yellow tint of the skin. The bone marrow becomes normal in appearance. Porges has reported a cardiac insufficiency in a patient with marked edema and a urinary output of 600 c.c. a day, who voided 3500 c.c. on the second day after instituting a liver diet, and in the days following had an output of as much as 35,000 c.c.

In 1927, Koessler-Maurer advocated a diet heavy in vitamins and published favorable reports of the diet in treating pernicious anemia. They make use of the following foods rich in vitamins: whole wheat bread made with milk (A,B,D,E,F); wheat germ (B,E,F); milk and cream (A,B,D); butter (A,D); eggs (A,B,D); beet greens (A,B); dandelion greens (A,B); carrots (A,B,C); cauliflower (A,B,C); Swiss chard (A,B); lettuce (A,B,C,D,E,F); spinach (A,B,F); endive (A,C); tomatoes (A,B,C,F); sweet potatoes (A,B); Hubbard squash (A); fresh string beans (A,B,C); peas (A,B); oranges (B,C); lemons (B,C); grapefruit (B,C); bananas (B,C); fresh berries (B,C).

Of meats, liver and kidney contain the largest amount of vitamins A and B although they also contain vitamins D and E. Sweetbreads, brain, beef heart and lungs stand next in vitamin value. Muscle meat is much inferior in vitamin content.

The menu of Koessler and Maurer is given in full:

Breakfast:

One orange sliced, or one-half grapefruit, or one baked apple with cream, or a dish of apple sauce, or fresh pineapple or prunes.

Graham bread made with milk, two or three slices equal to 40 gm. toasted.

Butter, two pats, 10 gm. each.

Oatmeal, one dish equal to 20 gm. of dry weight (3 heaping tablespoonfuls).

Cream, 20 per cent as much as desired.

Eggs, one or two, at least the yolks.

Milk, two glasses, each six ounces of milk and one-half ounce of cream. (If this quantity of milk seems too much for breakfast, one glass can be taken two to two and one-half hours later).

Dinner at noon:

Milk and cream, 6 ounces of milk and one-half ounce of cream.

Whole wheat bread made with milk, 40 gm.

Butter, two pats, 10 gm. each.

Meat: liver (calf's liver, chicken liver, goose liver, liver sausage), or sweetbreads, kidney (veal or mutton), calf's brains or calf's lungs; 150 gm.

Tomatoes, fresh, stewed, boiled or canned, 100 gm. Spinach or carrots, 100 gm. Lettuce or raw cabbage (cole slaw), dressing made with oil and lemon juice.

Custard or omelet with jelly (raspberry or orange marmalade), or vanilla ice cream.

At four o'clock:

One glass of milk, 6 ounces of milk and one-half ounce of cream.

Supper:

Any one of the meats given for dinner: 100 gm. of liver, kidneys, sweetbreads, brains, beef heart, lungs; or 100 gm. of beefsteak or lamb, or, instead of the meat, two eggs.

From one to two glasses of milk, 6 ounces of milk and one-half ounce of cream.

Bread, whole wheat, from 30 to 40 gm.

Butter, two pats, 10 gm. each.

Tomatoes, spinach, Hubbard squash, carrots, cauliflower, peas, beans (kidney, navy or fresh string beans), sweet or Irish potatoes, beet tops, Swiss chard, lentils, lettuce. At least three vegetables, from 80 to 100 gm. of each.

If two glasses of milk cannot be taken with supper, one glass may be taken before retiring.

Medication:

One-half hour before each meal, 1 tablespoonful of wheat embryo extract or orange juice.

Immediately before each meal, (three times

daily), 50 drops of dilute hydrochloric acid in orange juice or water. During the meal, 50 drops of hydrochloric acid in water. After the meal, 50 drops of hydrochloric acid in water.

Three times daily, from one to two teaspoonfuls of powdered brewer's yeast (Harris'), or three times daily two tablets of Harris' Yeast Tablets (standardized for vitamin B content).

The full diet contains all the iron required. As long as the full diet cannot be taken three times a day, one teaspoonful of a 10 per cent aqueous solution of ferric citrate should be taken in the milk drunk with each meal.

Still another diet effective in treating sprue and pernicious anemia, and recommended by Elders, is 100 gm. of underdone meat or liver; 1.5 liters raw milk with six yolks of eggs, two or three oranges, tomatoes, cucumbers, tea and coffee. Cod-liver oil is also administered.

Richter, Ivy and Klim,* performed an interesting experiment. Two patients were observed who died of severe pernicious anemia, one of whom had previous liver treatment. At autopsy, the livers of both were removed, extracted, and given to pernicious anemia patients. The extract of the liver without treatment had no effect on the condition; the other did cause a remission.

Lately, gastric juice has been found to induce a remission either by direct intramuscular injection or by feeding meats previously digested in vitro and in vivo.

It is thought that there is a substance or hormone in the gastric juice of normal man called "Addisin." It is destroyed by boiling, is dialyzable through colloidin, and is exhaustible. It withstands chemical treatment known to destroy enzymes. Gastric juice has been concentrated in vacuo from swine, dog, cattle and man, and since it is present in all, is a normal constituent of omnipara, carnivara and herbivora. It is probably widely distributed throughout the animal kingdom. The juice is evaporated to 3 to 5 per cent of its original volume, and its activity is proved by intramuscular injections of 4 or 5 c.c. in patients with pernicious anemia.

When the red blood count is less than 2,000,000, 150 gm. of liver given daily will increase the red blood count concentration about 113,000,000 in a month. If double the amount is given, the amount of increase is about 2,500,000. Certain cases require more "potent material" than others, and each case is a rule unto itself.

* Richter, O., A. C. Ivy, and M. S. Klim: Proc. Soc. Exper. Biol. and Med., p. 1093, (June) 1932.

POSTMENOPAUSAL VAGINAL BLEEDING*

Preston T. Brown, M.D., Iowa City

The importance and significance of vaginal bleeding occurring after the menopause has been frequently overlooked. Such bleeding, being rarely of functional origin and never normal, always demands careful microscopic examination of tissues removed from the cervix *and* uterine cavity before its non-malignant character can be established. The common tendency to dismiss further consideration of this symptom, with the statement that the menses have returned or that the bleeding is due to the "change of life," is responsible for deplorable delay in arriving at a correct diagnosis and in instituting effective treatment in many cases of malignant disease. From the figures here recorded, which are in accord with those from many other clinics, it can safely be stated that no other single symptom is as certainly indicative of cancer of the female genitalia as is postmenopausal bleeding. The incidence of malignant disease in these patients is so high that cancer should be the provisional diagnosis in every instance, to be eliminated only after an exhaustive search.

The frequency of postmenopausal bleeding is shown by the records of the University Hospital from July 1, 1926, to June 30, 1931, during which time 164 patients were admitted with this complaint. The final diagnoses, established only after microscopic examination of tissues removed by cervical biopsy, curettage, or abdominal exploration, are tabulated.

FINAL DIAGNOSES IN 164 CASES OF POSTMENOPAUSAL BLEEDING

Diagnosis	Number of cases	Per cent
Cancer of cervix	67	40.8
Cancer of body of uterus	38	23.1
Cancer of ovary	2	1.2
Pelvic cancer of undetermined origin	3	1.8
Total malignant lesions	110	66.8
Uterine Polyp	26	15.8
Myoma uteri	7	4.2
Senile vaginitis	2	1.2
Chronic cervicitis	10	6.6
Miscellaneous benign lesions	9	5.4
Total benign lesions	54	33.2

The fact which challenges attention is that two-thirds of these patients had cancer somewhere in the genital tract to explain the abnormal bloody

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discharge. Of these tumors the largest group were located in the cervix. It should, however, be noted that the percentage of corporeal cancers is much higher (34.5 per cent of the malignant tumors) than in younger age groups, where 90 per cent of malignant lesions of the uterus are cervical. Cancer of the body of the uterus cannot be diagnosed by ordinary vaginal examination; curettage with microscopic examination of the curettings is absolutely essential.

Uterine polyps, cervical and endometrial, were found to be the most common benign lesion producing bleeding after the menopause. They should always be examined microscopically, even though they rarely undergo malignant change. Uterine myomata were present in a number of patients with cancer, but in only seven instances were apparently the sole cause of the bleeding, since careful examination of the removed uteri revealed no malignant change. The group of miscellaneous benign lesions included acute endometritis, pyometra, diabetes and arterial hypertension, as well as a few patients in whom no adequate explanation for the bleeding could be determined. These last patients should be kept under observation, since occasionally they will later develop cancer, which may be overlooked because of the previous negative findings.

Among the benign lesions, chronic cervicitis was fairly common, but could not be differentiated from early cervical cancer except by histologic examination of tissue removed at biopsy. The Chrobak or probe test is of value in these cases but cannot be relied upon exclusively. [Cancer invades the deeper structures of the cervix early in the course of the disease, and a small silver probe pressed firmly against the portio vaginalis over the suspicious area will usually penetrate to a depth of a quarter inch or more, while the firm tissue underlying a cervical eversion or erosion will resist the probe.]

SUMMARY

1. Vaginal bleeding occurring after the menopause is never normal and rarely functional. In two-thirds of this series it was due directly to cancer.

2. All postmenopausal vaginal bleeding should be viewed as evidence of malignancy until careful pelvic examination, including curettage *and* cervical biopsy with histologic examination of the removed tissues, has shown the exact character of the lesion.

3. The most common benign lesion found in this series was uterine polyp.

4. Uterine myomata were found to be an uncommon cause of postmenopausal bleeding.

SYMPTOMS AND DIAGNOSIS OF HETEROPHORIA*

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For the past seventy-five years, ophthalmologists have been calling attention to the importance of latent muscle imbalance, or heterophoria, in the proper examination and treatment of our refraction cases. Today this condition is more important than ever before, because of the marked difference in our mode of life and travel. This, we believe, is a big factor in calling it to our patients' attention. For instance, our means of travel has increased from a gait of four to eight miles an hour until now we cannot believe ourselves moving unless we are traveling at least sixty miles an hour. These present conditions demand of our eyes, a much faster and more accurate alignment so that we may attain a clear picture.

Various tests and forms of treatment have been brought forward but none was completely satisfactory so that at the beginning of our career in ophthalmology, we shied and almost ran in terror at the mention of heterophoric symptoms.

About six years ago, while attending Dr. C. S. O'Brien's first eye course at our State University, I became interested in trying to do something for this class of patients. Since then, I have spent more or less time studying and experimenting with the various methods, in attempting to relieve patients of these very trying symptoms. During this period, Dr. H. D. Fallows and I have accumulated a series of 938 cases upon which this paper is based.

Our statistics in the earlier cases were not so complete as at present, and therefore our percentage may not be as accurate as one might wish, but the results will, in the main, give us a fairly correct picture or at least one which we hope may be of value in stimulating thought and discussion. Before going into the symptoms, it might be well to state that over one-half of these patients had been previously refracted and glasses prescribed, without relief of symptoms; another fairly large group were those whose refraction was such that we could not believe it accountable for their symptoms; and the remainder were those who we felt had predominating heterophoric symptoms, or their preliminary test was such that we suspected a definite muscle imbalance. It may also be of interest to note the types of refractive error in which we most commonly found heterophoric symptoms. The largest group was that of astigmatism compound hyperopia; of these there were 418 or 44.5 per cent of all cases; the next was the simple hyperopic group of which there were 250 or 26.5

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per cent of all cases, and in this group were 117 or 46.8 per cent who had errors of one diopter or less, which we do not believe would alone cause any marked symptoms. The remainder appeared in twenty-three different group combinations and I will not burden you with them, except to say that in totaling all cases we found that of the 1,876 eyes examined, 1,608 were in the hyperopic groups, 153 in the myopic groups, 109 in the mixed astigmatic group, and six showed no refractive error.

SYMPTOMS

The most predominating symptom was headache and this was present in 655 or 69.8 per cent of all cases. Of this number, 381 or 39.1 per cent, did not qualify their headache, 193 or 20.6 per cent complained of frontal type, 77 or 8.2 per cent of occipital, 22 or 2.2 per cent of temporal, 21 or 2.2 per cent of vertex localization, and 68 or 7.2 per cent of migraine. The second predominating symptom was that of disturbances caused by riding, shopping or moving pictures, sometimes called the panoramic headache, although in this series headache was not always present. This symptom was present in 434 or 46.2 per cent of all cases. A third symptom was that of lid irritation, such as tearing, itching, burning, etc. This occurred in 350 or 37.3 per cent of the cases. Photophobia occurred in 310 or 33.04 per cent. Blurring vision occurred in 267 or 28.4 per cent. Of the remaining symptoms, diplopia occurred in 77 or 8.2 per cent; pain in the neck, 76 or 8.2 per cent; inability to read comfortably, 65 or 6.9 per cent; eyeache, 61 or 6.5 per cent; dizziness, 52 or 5.5 per cent; bloodshot eyes, 45 or 4.7 per cent; nausea, 40 or 4.2 per cent; drawing or pulling of the eyes, 36 or 3.8 per cent; drowsiness caused by reading, 30 or 3.1 per cent; eyelids scale, 21 or 2.2 per cent; nervousness, 20 or 2.1 per cent; skipping lines, 18 or 1.9 per cent; inability to wear glasses, 14 or 1.8 per cent; repeated styes, 13 or 1.3 per cent; vomiting, 12 or 1.2 per cent; eyes not focusing, 11 or 1.1 per cent; blinking, 11 or 1.1 per cent; eyes inclined to cross, 10 or 1.05 per cent; losing place while reading, 6 or .063 per cent; failure in school, 6 or .063 per cent; speech impediment, 1 or .01 per cent.

Of course, all of these symptoms were not due to heterophoria, but they may be attributed to errors of refraction. Those which we believe are more common to the heterophoric group are headache, especially the occipital and panoramic types, photophobia, diplopia, pain in the neck, discomfort at close work, dizziness, bloodshot eyes, nausea, eyes pulling or drawing, skipping lines, inability to wear glasses, nervousness, vomiting, eyes not focusing and losing place while reading.

DIAGNOSIS

Since the recognition of this condition, various methods of diagnosis have been advanced. During the past few years, there has apparently been a renewed impetus; new methods have been advocated, but as yet none seems to solve this very perplexing problem.

Of course, no test can be considered unless the patient is wearing glasses which accurately correct his refraction.

The tests which have been brought out and with which you are all more or less familiar, are Von Graefe's equilibrium test, in which the line and dot and displacing prism are used; the Maddox rod test, with which I believe, we are all familiar; Duane's parallax test in which he alternately covers and uncovers an eye, using a prism in the proper direction to fuse the two objects, and at the same time, noting the deviation of the eye objectively; the red glass test, in which the eye is taken off its guard because of the change in color, and diplopia is produced; and the double prism test which in all practical aspects, is similar to the Maddox test.

More recently, in 1920, Marlow brought out his test of monocular occlusion, and since then, several papers on the subject have appeared with more or less favorable comment. Since you are familiar with this test, I will not comment on the technic, but I believe it has done more to stimulate us in trying to find some solution of this problem, than anything heretofore has done.

Appleman's[1] method of uncovering latent hyperphoria is as follows:

1. A Maddox rod is used to measure the lateral and vertical balance in the usual manner at six meters. This constitutes the primary measurement for distance.

2. Having completed the primary distance test, the patient is given a card containing the dot and line of Graefe and is told to hold it in the horizontal position at the reading distance, approximately 33 cm. from the eyes. In testing for hyperphoria, a 20.00 degree prism is placed before one eye with its base toward the nose. Lateral diplopia is thus produced, and if no hyperphoria exists, the two images will be on the same horizontal plane. If one is higher, a prism of sufficient strength base, up or down, depending on whether the right or left eye deviates, is placed before one eye to bring images on the same horizontal plane.

3. The prism found to give equilibrium at the near test is left in position before the patient's eyes, and he is told to look again at the light at six meters. The Maddox rod is then replaced before one eye. The patient will now have an overaction

for distance, and if the primary distance test revealed left hyperphoria, there will now be a right hyperphoria. The examiner should decrease the strength of the prism by half degrees until the balance is again restored for distance. In doing this, care should be taken to superimpose the second prism before the first is removed, or at the instant this is done, so that there will be no interval for readjustment or fusion between changes. The difference between the amount found in this second distance test and that found in the first, represents the latent error which was compensated for because of muscular contraction called forth by the natural desire for single, superimposed images. Appleman reported 500 cases.

Abraham[2] reporting a new test for vertical phorias, describes his method as follows:

1. The patient is seated approximately twenty feet from the spot of light, five-eighths inch in diameter. The head is held erect and the eyes in primary position. The DeZeng phorometer is used. The pupillary distance and spirit level are adjusted for each patient.

2. One of the Maddox rods is placed before one eye and the rotary prism before the other.

3. The room is darkened and the Maddox rod turned so that the patient sees a horizontal streak of light in addition to the spot of light.

4. The patient is asked the position of the streak and if above or below, the prism is rotated until the streak passes through the center of the light. The reading is then taken.

5. The rod is now removed from before the eye. The prism with its zero mark at 180 degrees is now slowly rotated upward and downward, the patient counting the images and saying two, one, two, one, etc., until this has been done a minimum of three times in each direction. After the

CASE NO.	EYE OCCLUDED	FINDINGS	
1	Right	Ex. 12 dist. 20 near	R. H. 2½ dist. 2 near
	Left	Ex. 10 dist. 20 near	L. H. 3½ dist. 3 near
2	Right	Ex. 15 dist. 15 near	R. H. 1½ dist. 1½ near
	Left	Ex. 15 dist. 15 near	L. H. ½ dist. ½ near
3	Right	Ex. 8 dist. 20 near	R. H. 4 dist. 4 near
	Left	Ex. 6 dist. 20 near	L. H. 2 dist. 2 near
4	Right	Ex. 2 dist. Ex. 4½ near	R. H. 6 dist. 4 near
	Left	Es. 2 dist. Ex. 4 near	L. H. 3½ dist. 3½ near
5	Right	Ex. 15 dist.	R. H. 1 dist. L. H. ½ near
	Left	Ex. 9 dist. 15 near	L. H. 2 dist. 2 near
6	Right	Ex. 7 dist. 20 near	R. H. 2½ dist. 2 near
	Left	Ex. 5 dist. 7 near	L. H. 1½ dist. 1½ near
7	Right	Ex. 8 dist.	R. H. 2 dist. 4 near
	Left	Ex. 4 dist. 15 near	L. H. 1 dist. 1 near
8	Right	Ex. 15 dist. 20 near	L. H. 1 dist. 2 near
	Left	Ex. 13 dist. 20 near	L. H. 4 dist. 4 near
9	Right	Ex. 6 dist. 8 near	L. H. 1 dist. 1 near
	Left	Ex. 6 dist. 4 near	L. H. 2 dist. 2 near
10	Right	Ex. 5½ dist. 20 near	L. H. 1 dist.
	Left	Ex. 5 dist. 12 near	L. H. 5½ dist. 5 near
11	Right	Ex. 1½ dist. 20 near	R. H. 4½ dist. 5 near
	Left	Ex. ½ dist. 20 near	R. H. 4 dist. 4 near
12	Right	Ex. 6 dist. 20 near	R. H. 2 dist. 3 near
	Left	Ex. 6 dist. 20 near	L. H. 1 dist. 1 near
13	Right	Ex. 5 dist.	R. H. 5½ dist. 3 near
	Left	Ex. 1½ dist. 9 near	R. H. 1 dist. 1 near
14	Right	Ex. 12 dist. 20+ near	R. H. 2½ dist. 3 near
	Left	Ex. 11½ dist. 20+ near	L. H. 4 dist. 4 near
15	Right	Ex. 7 dist. 18 near	R. H. 3 dist. 3 near
	Left	Ex. 6 dist. 18 near	L. H. 3 dist. 3 near
16	Right	Ex. 17 dist. 10 near	R. H. 1½ dist. 1½ near
	Left	Ex. 28 dist. 18 near	L. H. 1½ dist. 1½ near
17	Right	Ex. 6 dist. 20 near	R. H. 3½ dist. 3½ near
	Left	Ex. 10 dist. 20 near	R. H. 2½ dist. 2 near
18	Right	Ex. 5 dist. 10 near	R. H. 2 dist. 2 near
	Left	Ex. 7 dist. 20 near	L. H. ½ dist. 1 near
19	Right	Ex. 3 dist. 15 near	L. H. 1 dist. ½ near
	Left	Ex. 4 dist	L. H. 4 dist.
20	Right	Ex. 9 dist. 10 near	R. H. 5½ dist.
	Left	Ex. 9 dist. 10 near	R. H. 2 dist. 1 near
21	Right	Ex. 0 dist. 2 near	R. H. 5½ dist. 2 near
	Left	Ex. ½ dist. 3 near	L. H. 9 dist. 8 near
22	Right	Ex. 1 dist.	R. H. 6 dist. 0 near
	Left	Ex. 1 dist.	L. H. 2½ dist. 2 near
23	Right	Ex. 11 dist. 12 near	R. H. 3 dist. ½ near
	Left	Ex. 11½ dist. 12 near	R. H. 1 dist. 1 near
24	Right	Ex. 7 dist. 15 near	L. H. 1½ dist. 1½ near
	Left	Ex. 5 dist. 18 near	L. H. 8 dist. 6 near
25	Right	Ex. 7 dist. 20 near	R. H. 5 dist. 2 near
	Left	Ex. 7 dist. 20 near	L. H. 7 dist. 4 near
26	Right	Ex. 2 dist. 7 near	R. H. 1 dist. 1½ near
	Left	Ex. 2 dist. 12 near	L. H. ½ dist. 0 near
27	Right	Ex. 3½ dist. 15 near	R. H. 3½ dist. 3 near
	Left	Ex. 5 dist. 20 near	L. H. 4½ dist. 3 near
28	Right	Ex. ½ dist. Ex. 15 near	L. H. 1 dist. 1 near
	Left	Ex. ½ dist. Ex. 20 near	L. H 1½ dist. 1 near

described rotations, one further rotation is continued through the patient's "one" and is stopped the moment the patient says the next "two". If the last direction of rotation has been down, the reading is recorded as so much prism base down overcome by the eye behind the prism.

6. Step number five is repeated and the upward reading is obtained and recorded.

7. Step number five is again repeated, but this time the stop is made when the patient says "one". The Maddox rod is then placed before either eye so that the horizontal streak is again seen, and the prism rotated sufficiently to bring the line through the light. In this manner the reading in prism diopters is noted. It is essential that no changes be made in the lighting arrangement before the Maddox rod is placed before an eye and the prism rotated as necessary.

Summarizing Abraham's procedure, there are finally four readings; one obtained in step number four; two obtained by steps number five and six; and one, the last reading with the Maddox rod and prism, with the muscles in so-called innervational equilibrium (Step 7). This application of the Maddox rod is referred to as the Maddox rod test number two. Its value is seen in the fact that frequently reading number one is zero, while the computations from readings two and three, and reading four, show definite hyperphoria. Equally frequent is the finding of a greater amount of hyperphoria by this modified duction test and the Maddox rod test number two; indeed, it is sometimes two and three times the first reading. On the other hand, duction tests as ordinarily done often show readings higher by one prism diopter than that obtained by the first method described. In fact, it depends very much on which way the prism is first rotated as to which will be the higher of the two readings as usually taken. Marlow presented data that seemed irregular. In one instance, he presented a patient with three prism diopters, left hyperphoria, yet the maximum the patient overcome by the ordinary duction method was three prism diopters base down before the left eye. Certainly one would expect to find the patient with single binocolar vision overcome more prism base down left eye than three prism diopters, when this was just equal to the left hyperphoria. Such irregularities are never found in the foregoing "modified duction tests" (Steps 5 and 6.). Abraham's series included 192 cases.

Dunnington, in a recent article, advocated the screen and parallax test of Duane, supplemented by a careful plotting of the diplopia when present. He stated that if one routinely measures the deviation in the different directions of gaze, he will be struck by the frequency with which he can make a positive diagnosis of the paretic muscle.

In the diagnosis of our cases we have been using Marlow's method of monocular occlusion. This has given us some very nice results, and many of our patients have worn their corrections from two to five years with complete relief of their symptoms. With some, of course, we have had our troubles and others, no doubt, have consulted someone else. Considering all factors, however, I believe that our results have been much better than would have been attained, had we completely ignored muscle errors. I felt very well satisfied with both test and results until a year ago when I discussed Dr. Taylor's paper in which he reported varying results in occluding first one eye and then the other in certain cases. I determined to verify his results and have so far occluded first one eye and then the other in fifty-six cases, the results being shown in the accompanying table.

Of these patients, twenty had been previously occluded. The length of occlusion was one week for each eye in fifteen cases; in one case, eight days; in two cases, ten days; in one case, fifteen days; and one, in which the left eye was occluded January 22, 1929, for nineteen days, and again on November 3, 1930, with the same result, and then the right eye occluded for thirty days, showed right hyperphoria of 5½ degrees.

This last case, I believe, shows that if an eye is occluded long enough to bring out its error, repeated tests will verify it. This we have done on several different occasions before we did any occlusions of both eyes. In the remaining thirty-six cases, each eye was occluded not less than three days, and the average was about one week.

In occluding both eyes, I found that in forty-one cases, a right hyperphoria was present on occluding the right eye and a left hyperphoria on occluding the left eye. In six of the cases, the right hyperphoria found on occluding the right eye was practically the same as the left hyperphoria found on occluding the left eye. In the remaining thirty-five cases, there was a change in type and the difference between the two phorias varied from ½ degree to 3¾ degrees.

Of the fifteen showing no change in the type of phoria, eight were left hyperphorias and there was a variation of ½ degree to 6½ degrees between the two eyes; in the seven right hyperphorias, there was a difference of ½ to 4 degrees between the two eyes.

In twenty-one of the doubly occluded cases, I have checked results with those obtained by using a displacing prism and in eight of the cases I used both this and Abraham's method.

In those cases, which I checked by using the

CASE NO.	EYE OCCLUDED	FINDINGS							
29	Right	Ex.	1½	dist.	10	near	R. H. 2½ dist.	2	near
	Left	Ex.	1½	dist.	10	near	L. H. ¼ dist.		
30	Right	Ex.	3	dist.	10	near	R. H. 1½ dist.	1	near
	Left	Ex.	2½	dist.	20	near	L. H. 1 dist.	1	near
31	Right	Ex.	6	dist.	20	near	R. H. 3½ dist.	3	near
	Left	Ex.	6	dist.	20	near	L. H. 2 dist.	1	near
32	Right	Ex.	3	dist.	20	near	R. H. ½ dist.	½	near
	Left	Ex.	3	dist.	20	near	L. H. 1 dist.	1	near
33	Right	Ex.	½	dist.	8	near	L. H. ½ dist.	½	near
	Left	Ex.	2	dist. Ex.	6	near	L. H. 2 dist.	½	near
34	Right	Ex.	6	dist.	20	near	R. H. ½ dist.	½	near
	Left	Ex.	5	dist.	20	near	L. H. 1½ dist.	1	near
35	Right	Ex.	10	dist.	20	near	R. H. 1 dist.	1	near
	Left	Ex.	10	dist.	20	near	L. H. 3 dist.	1	near
36	Right	Ex.	3	dist.	20	near	R. H. 3 dist.	3	near
	Left	Ex.	5	dist.	20	near	R. H. ¾ dist.	½	near
37	Right	Ex	1½	dist. Ex.	15	near	R. H. 2½ dist.	2	near
	Left	Ex.	3	dist.	15	near	L. H. ¾ dist.	½	near
38	Right	Ex.	6	dist.	15	near	R. H. ½ dist. L. H.	½	near
	Left	Ex.	3	dist.	15	near	L. H. 2 dist.	1	near
39	Right	Ex.	8	dist.	20	near	R. H. 5 dist.	3	near
	Left	Ex.	4	dist.	15	near	L. H. 1¼ dist.	1	near
40	Right	Ex.	5	dist.	20	near	R. H. 4½ dist.		
	Left	Ex.	6	dist.	20	near	L. H. 2½ dist.	2	near
41	Right	Ex.	4	dist.	20	near	R. H. 1½ dist.	2	near
	Left	Ex.	3	dist.	20	near	L. H. 2 dist.	2	near
42	Right	Ex.	8	dist.	20	near	R. H. 3 dist.	3	near
	Left	Ex.	7	dist.	18	near	L. H. 2 dist.	3	near
43	Right	Ex.	3	dist.	20	near	R. H. 1½ dist.	1½	near
	Left	Ex.	2	dist.	15	near	L. H. 1 dist.	1	near
44	Right	Ex.	1	dist.			R. H. 3 dist.		
	Left	Ex.	3	dist.			L. H. 1 dist.		
45	Right	Ex.	8	dist.	20	near	R. H. 4½ dist.	5	near
	Left	Ex.	7	dist.	20	near	R. H. ½ dist.	1	near
46	Right	Ex.	4½	dist.	20	near	R. H. ¾ dist.	1	near
	Left	Ex.	3½	dist.	20	near	L. H. 3 dist.	4	near
47	Right	Ex.	10	dist.	20	near	R. H. 1 dist.	1	near
	Left	Ex.	7	dist.	20	near	L. H. 2 dist.	2	near
48	Right	Ex.	3	dist.	20	near	R. H. 3 dist.	3	near
	Left	Ex.	2	dist.	15	near	L. H. 1½ dist.	0	near
49	Right	Ex.	1	dist.	15	near	R. H. 5 dist.	6	near
	Left	Ex.	1¼	dist.	18	near	L. H. 1 dist.	1	near
50	Right	Ex.	7	dist.	20	near	R. H. 1½ dist. L. H.	½	near
	Left	Ex.	5	dist.	15	near	L. H. 2½ dist.	2	near
51	Right	Ex.	2	dist.	10	near	R. H. 1 dist.	1	near
	Left	Ex.	3	dist.	10	near	L. H. 1½ dist.	½	near
52	Right	Ex.	7	dist.	20	near	R. H. 4 dist.	2	near
	Left	Ex.	2½	dist.	15	near	L. H. 2 dist.	2	near
53	Right	Ex.	½	dist. Ex.	7	near	R. H. 4½ dist.	3	near
	Left	Ex.	2	dist. Ex.	9	near	L. H. 1½ dist.	1	near
54	Right	Ex.	2	dist.	10	near	R. H. 2 dist.	2	near
	Left	Ex.	2¼	dist.	10	near	L. H. 4 dist.	2	near
55	Right	Ex.	2½	dist.	8	near	R. H. 2¼ dist.	2	near
	Left	Ex.	2½	dist.	10	near	L. H. ¼ dist.	½	near
56	Right	Ex.	4½	dist.	20	near	L. H. ½ dist.	½	near
	Left	Ex.	7	dist.	18	near	L. H. 1½ dist. R. H.	½	near

displacing prism and occlusion, I found that the two tests agreed in three cases; in seven there was an increase in the amount of error following occlusion; in one there was a decrease; and in ten, there was a change in type.

In the eight cases checked by Abraham's method, I found that the two tests agreed in one; in two the error was increased following occlusion; and in five there was a change in type; I also noted in comparing Abraham's tests and the displacing prism, that in five cases they changed type, in two there was a decrease in the amount of error; and in one there was an increase.

In concluding, I will say that we have found a marked discrepancy in occluding both eyes. We have also noticed in using the Maddox rod in our preliminary test, that if we use the rod over one eye and then the other, two tests rarely agree, and that often there is a change in type. As to which test is most accurate, or whether a better one will be brought out, only time will tell. For the time being, we intend to base our prescriptions on the findings of double occlusion and check this with the other methods described, until we can feel sure of their accuracy or discard them. At present, we feel that occlusion gives us the more reliable test.

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Discussion

Dr. Gordon F. Harkness, Davenport: Careful work, with detailed records such as Dr. Chenoweth has presented, is indeed a credit to our meetings. I really am not the one who should open the discussion

on such a paper, because I cannot support or controvert the opinions expressed by any statistical records. There are several facts that seem very unusual to me.

The first is that the author has been able to find more than nine hundred patients whose dissatisfaction with their refractive corrections has really thrown them into the heterophoric class. I am sure that over a long period of time I, at least, have not known of anywhere near that number of patients who have symptomatically placed themselves in that group. Perhaps the dissatisfied ones have gone elsewhere.

I wonder what the author's procedure is with the ordinary patient. Personally, with the usual history and record of complaints, manifest subjective refractive errors, and muscle balance or imbalance are recorded, together with retinoscopic findings, without any cycloplegic. My own procedure is different from the routine in that I make general use of a three-hour atropine cycloplegic on patients under thirty-five years of age. Of course there are exceptions to this rule, but I have never been converted to a routine homatropine or a three-day atropine cycloplegic. If the patient does not particularly complain of extra-ocular troubles and if the records show no striking imbalances, they are disregarded for the time being.

It is said that refraction constitutes one of the most exact aids in our medical armamentarium. This statement is true, yet we see many exceptions to it; in individuals with measurable refractive errors who have no trouble; and in those for whom we have to temper our findings to a correction which gives the patient more comfort. It seems rather significant to me that in the author's statistics of those in his heterophoric group, the predominating symptom in 85 per cent was headache. Panoramic symptoms, which one might think would be quite prominent, dropped to 46 per cent, blurring to 28 per cent, inability to read comfortably 7 per cent, eye ache 6.5 per cent, skipping lines 2 per cent, and losing reading points .06 per cent. I would expect a higher percentage of panoramic symptoms but have no statistics to support this assertion.

I notice that Dr. Chenoweth says that 85 per cent of his cases fall within the hypermetropic class. Since headache and hypermetropia go hand in hand, headache does not give the physician a clue as to the type of case when first seen.

If a patient does not obtain relief from refractive corrections then we should think of the extra-ocular muscles.

The author's paper deals almost entirely with the problem of vertical deviations, but one must not forget the overaction and insufficiencies of the lateral muscles. We should remember Dr. F. W. Dean's paper in which is discussed the static exophorias and the prescribing of prisms, base in. Convergence and stereoptic exercises to overcome insufficiencies of the lateral muscles have a definite place in our procedures, although we should never use them as a means of revenue through repeated office visits.

Returning to the author's paper, I feel that there is a lack of exactness and reliability of findings. Dr. Taylor's very fine paper of a year ago concluded that it was best to base prescriptions on the findings of double occlusion, and check the same against the other methods, until we felt sure of their accuracy or until we discarded them. For example, in fifty-six cases, only fifteen showed the same type of hyperphoria with double occlusion; forty-one cases showed right hyperphoria on occluding the right eye, and left hyperphoria when occluding the left eye.

When the double occlusion test was checked against the displacing prism test in twenty-one cases, only two agreed, and in ten (nearly half), there was a chance of type. Again in eight cases checked against the Abraham method, one agreed, five changed in type, and in two there was a variation. In checking the Abraham method against the displacing prism in the eight cases, five changed type and the other three showed an increase or decrease of type.

These figures leave one in very much of a dilema. You know the error is there and it takes you back to the old adage that "What will cure the tailor will kill the butcher." It means a certain amount of empiricism; try it one way and if it does not work, try another.

There is one other thought that I might add. The extra-ocular muscles move the eyes by jumps so that vision, as the eyes move, is not a regular movement. As you read from one side of the page to the other, the eyes do not move gradually but rather by a "stop and go" system. If you will look at your eyes in a hand mirror and change their position, you cannot see them move. In addition to this, in binocular vision, the responsibility is not truly divided between each eye. In the majority of us, the right eye is dominant, but if you are left-handed, the chances are that your left eye is dominant. The non-dominating eye is an assistant. Since symptoms of heterophoria are due to the mutual relationships of the two eyes in their work, such symptoms usually appear because the non-dominating eye cannot do his part of the work. Therefore when we are making corrections by the use of prisms, we should place the prisms as far as possible from the non-dominating, but disturb as little as possible the commanding eye.

There is another factor that might lead some to consider a heterophoric condition as the cause of symptoms when in reality the position of the lenses may be at fault. Lack of decentration, through prismatic effect, may cause much trouble. A man born with one leg shorter than the other manages very well, but suddenly shorten one of two equal legs and the victim has a bad time. This is particularly true with certain lenses and the presbyopic, for here we have a change taking place in the association of accommodation and convergence, a condition which has been functioning as one reflex. Convergence independent of accommodation is a conscious effort. This change or loss of accommodation may disturb the convergence. In the presbyope there is always an increase of exophoria at, near, or over the distant

exophoria, if present. Here again prism correction in the reading segment alone, may relieve what has apparently been the other type of heterophoric case.

I want to complement Dr. Chenoweth on his fine paper which represents so much work. He does not presume to say the final word, for he knows that it is still a problem and there is no one method that offers a panacea. The patient still has his individuality which we must consider.

VISUAL FIELD CHANGES: A THREE-DIMENSIONAL MODEL FOR DEMONSTRATION PURPOSES*

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I am not at all certain that this is the time or place to present this paper; it would seem more fitting for a beginner's class, and in some respects for a kindergarten class, for as you will see the demonstration material is of such calibre. However, in working out this model of a visual field in three dimensions, its character became so much clearer than it had previously been, and some of the changes became so much more easily explained, that I could not but feel that you might be interested, even if I should not bring you anything distinctly new. I further felt that those of you who have to do with teaching ophthalmology might care to make use of the device. The cases which I will report are mentioned not primarily for the changes of the fields themselves, but to show the working of a three-dimensional model, although I have tried to select cases which presented interesting changes in the field of vision.

Someone has said that vision is a hill of sight in a sea of darkness. The normal field in the first model, as shown in Figure 1, is that hill and is built up from the isopters of Traquair given in his "Introduction to Clinical Perimetry." Visual acuity is measured vertically and the distance from the visual axis, horizontally. The base line isopter is taken by a 160 m.m. test object at 1000 m.m. or a visual angle of nine degrees. Each succeeding isopter is made by a test object subtending one-half the former angle. The peak of visual acuity at the visual axis is taken to be a test object subtending an angle of 0.45°, the limit of human visual acuity. The third isopter from the base is made by a test object of somewhat more than one degree and is the one most commonly used clinically for the periphery of the field. That is, a 5 m.m. object on the 250 m.m. perimeter. This is the one used in marking the changes which are illustrated in this paper. It is used, as you may see, because visual changes in the periphery might be considerable before they would be shown by a larger test object. In other words, the test becomes more sensitive as the slope of the model becomes less acute; for example, a slight depression of the visual acuity would allow the test object at the third or fourth isopter to be carried much closer to the visual axis than the same visual depression would allow a four-degree test object to be carried.

Central vision is usually tested clinically on the tangent screen at about the third isopter from the peak or on a 1 m.m. test object a meter distant. This may be seen about 25 degrees from the visual axis, thus adequately including the blind spot.

Color fields will not be considered with the models except to mention that each examiner's standards must be worked out for himself because the usual color isopters lie on the gradual slope of the model and hence are most sensitive to changes in color saturation and illumination. Once these standards are made, however, for this same reason the color fields are most valuable in noting small visual depressions.

Figure 2 shows the clinical field of W. B., a man eighty-one years of age, whose left eye has been



Fig. 1

enucleated because of a painful, absolute glaucoma. He has been seen over a period of three years during which time there has been no demonstrable change in the field which you see. Feeling that such a condition is satisfactory, we have made no attempt at surgery, since he is most faithful with his pilocarpine. The model, (Fig. 3), of course, shows the same features, but the sloping character of the field above the Seidle sign, brings out several interesting points. It illustrates the relative or indistinct scotoma where considerable vision is retained although it is not normal. It is in this area, where the pressure has already destroyed some fibers, that we may expect further changes, but fortunately because of the gradual, and hence more sensitive slope, such further changes would be quickly recognized. The sloping field also demonstrates the need of carefully selected, standard test objects, as to size, whiteness and illumination. Be-

* Presented before the Eighty-first Annual Session, Iowa State Medical Society, Section on Ophthalmology, Otology and Rhinolaryngology, Sioux City, May 4, 5, 6, 1932.

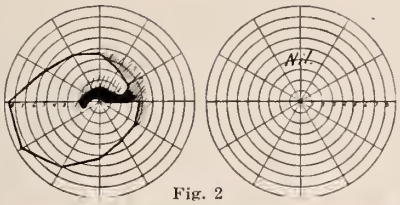


Fig. 2



Fig. 3

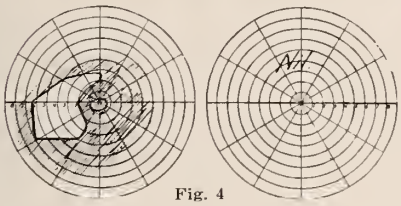


Fig. 4

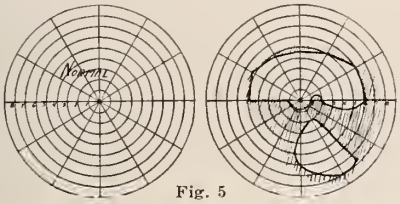


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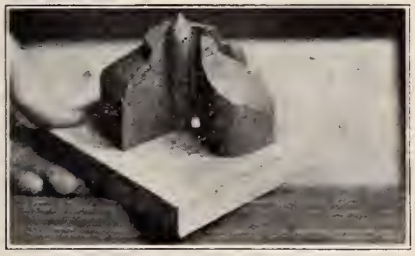


Fig. 6

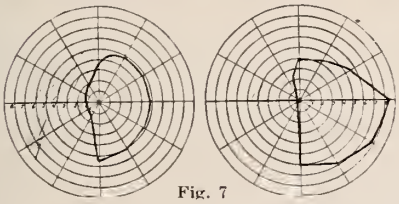


Fig. 7

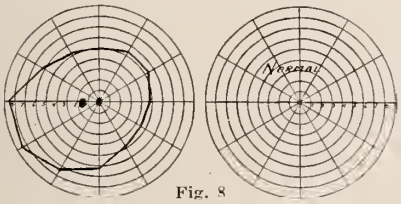


Fig. 8

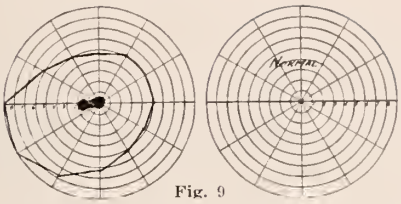


Fig. 9

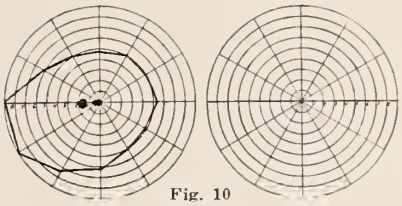


Fig. 10

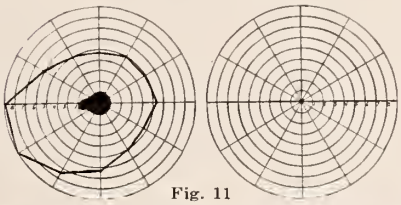


Fig. 11



Fig. 12

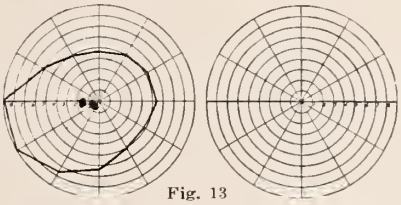


Fig. 13

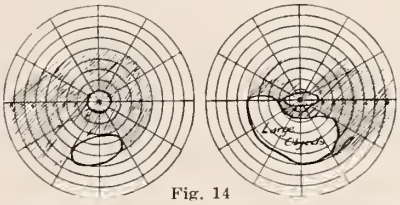


Fig. 14



Fig. 15

cause of the sensitivity of this portion of the field, changes in the standards might easily change the size of the clinical field.

The next field, (Fig. 4), is one which I have not modeled and am including here by way of digression, since it shows an advanced glaucoma requiring more vigorous treatment. Mrs. F. also had an absolute glaucoma in the left eye. The field of the other eye, after observation over a period of several months, was steadily lost under pilocarpine, which I always suspected was used none too faithfully, until it was as shown. An iridencleisis held this vision until her death a year and a half later.

Figure 5 shows the field of an interesting case of chorioretinitis juxta papillaris, which had two well marked lesions each with its set of destroyed nerve fibers. The model, (Fig. 6), I included because it differs from the glaucoma field in that the scotomata are absolute, with clear-cut edges and no relative areas beyond the limits of the scotomata. This patient is about thirty years of age, and I cannot help wondering, if forty years from now she has a touch of glaucoma, what her ophthalmologist will think of this field.

The field in Figure 7 shows another common type of change. Mr. C. was given a routine railroad examination in 1921. In the winter of 1929-1930 he suffered from a stroke and immediately afterward discovered that his vision was not normal. I have not made models of this homonymous hemianopsia with somewhat overshot fields, but they could be made by cutting a normal field vertically and slicing the visual edge very sharply.

This next sharply outlined scotoma, (Fig. 8), is found in the center of the field. The patient, an eleven-year-old boy, is the brother of a smaller boy who has a traumatic hole in the macula. He has a rather unusual pigmentation of the macula which the absolute scotoma shows has destroyed all the macular cones. This boy is very accurate in checking this scotoma by the peripheral tape method on a tangent screen.

The next fields shown are a part of a series taken at frequent intervals during an attack of retrobulbar neuritis. The field taken when the patient was first seen showed a central scotoma. At this time the x-ray revealed a dark left antrum (note that it was the right eye which was affected). The next field, (Fig. 9), was taken four days after the drainage of a purulent sinus. Eight days later this field showed considerable improvement. (See Figure 10.) Imagine our consternation when sixteen days later, we found the condition shown in Figure 11. Figure 12 shows the model for this field, with sloping sides to the scotoma because of the rather vague outlines. You will notice that it is very different from the sharp sides of the central scotoma model shown in Figure 6. An examination of the nose revealed that the opening in the sinus was swollen shut. A larger opening was made in the antrum and a month later we found the improvement noted in Figure 13. Subsequently we found complete restoration of vision. I am fully mindful of the importance of the rôle of multiple sclerosis in retrobulbar neuritis. In fact, I wish some time to report a most interesting case in which this disease played a prominent part in the symptom complex, but the course of this case could not help but impress one with the importance of a focus of infection as a causative agent. Perhaps this focus caused a localized lesion similar to that seen in a generalized sclerosis.

The last case, illustrates another common change of retinitis pigmentosa. This field, (Fig. 14), is one of a boy, whose parents are cousins. He is one of six children, five of whom have this disease. I have picked out this particular field because it shows a remnant of a ring scotoma. The fact that the patient is deaf added somewhat to the difficulty in taking the field but he quickly grasped the idea and is believed to be quite accurate. The model, (Fig. 15), shows the preserved central field, flattened horizontally with the tip not quite normally sharp because of only 20/30 vision, and a patch below in which he makes out large objects.

Discussion

Dr. C. W. Rutherford, Iowa City: Dr. Dean's model is based on the graph that Traquair constructed to explain quantitative perimetry; the graph being calculated from the isopters made by various sizes of white test objects. Dr. Dean's model, like a pyramid, can be made by superimposing discs that represent the several isopters. The aggregate of isopters resembles a contour map such as is used by the military department, and the model can be compared to a hill with the observer stationed on its peak.

The visibility of an object depends on its size and its distance from the eye, the contrast between object and background, the brightness of illumination, the duration of exposure to view and the transparency of the medium through which it is seen. Visibility is limited by the minimum visual angle for the patient undergoing examination; whenever the object is too remote to satisfy the angle, all other factors, however favorable in themselves, cease to have effect. To extend the range of visibility, larger objects must be employed.

The factors of contrast, illumination and transparent medium, are at a maximum value at the top of the hill and gradually lose value toward the bottom of it. As the smaller objects are carried in radial directions down the hill they are lost to view and larger ones must be substituted successively as the distance from the observer increases. The actual distances at which objects become invisible will vary, according to the character of the slope of the hill

and the presence of depressions on its sides. The greatest circumferential distances at which the several objects can be seen from the center are laid down on a chart as isopters or contour lines. The poorer the vision, the closer the lines will be together. When one knows the positions of the isopters made by these objects with normal vision, he can form an opinion concerning the state of the patient's vision by looking at the ordinary field chart or isopter map, Traquair's graph or Dean's model. A diagnosis is made according to the general pattern of the contour lines. In successive maps the lines are found farther apart, without change in intervening distances or nearer together, and these show that the vision is improving, stationary or declining. A prognosis can be made accordingly.

Traquair shows the blind spot as a deep well in one side of the hill; the observer can see nothing in the well. If the diameter of the well is increased the blind spot will be enlarged; if the increase is in but one direction the blind spot will show an enlargement in a corresponding direction. Similarly, a scotoma would result from looking into a depression in a side of the hill; if the depression were shallow enough to enable the observer to see large but not small objects in it, the scotoma would be relative, but if it were so deep that he could see nothing in it, the scotoma would be absolute. A crater in the top of the hill would represent a central scotoma. The scotoma of chorioiditis juxta papillaris would mean that the hill had lost a section with steep diverging sides, like a pie from which one piece had been taken. A hemianopia would be represented by one-half the hill cut away vertically or in total darkness.

The model adds to the understanding of quantitative perimetry and Dr. Dean is entitled to credit for presenting this demonstration.

Case Report

A CASE OF ENTEROLITH OF THE SMALL INTESTINE CAUSING OBSTRUCTION

Benjamin S. Barnes, M.D., Shenandoah

Enteroliths rarely occur in the small intestine and only a few cases have been reported.[1] Formation takes place slowly, and may result in an acute obstruction as in the case here reported, or the bowel may become sacculated about the slowly forming stone.[2] The stone may be associated with a marked constipation due to a partial or intermittent obstruction, although this is more likely to occur when the enterolith is in the large intestine.

Enteroliths are much more rare in the small bowel than in the colon. This may be due to the fact that the contents of the small intestine are normally liquid and are carried along comparatively rapidly. Any absorption of water is largely compensated by the secretions poured into the bowel. On the other hand the movements in the colon and sigmoid are more sluggish, while the great absorption of water leads to the formation of semi-solid or formed feces in the distal portion.

Chemical analyses[3] of enteroliths have shown varying results, some being composed largely of inorganic salts, others of organic materials, and some are combinations of organic and inorganic substances. Among the inorganic salts are found phosphates of lime and magnesia, and triple phosphates. Carbonates of lime and soda, or calcium compounds may be present. Enteroliths composed largely of inorganic salts are heavy and hard. They are likely to be deposited about some small nucleus of indigestible material. An enterolith may be formed of minerals taken in the form of medicine such as bismuth or magnesia. Organic materials often found are cholesterin, fats, fatty acids, and soaps.

When a concretion is found in the small intestine with a regular, round appearance it may be difficult to determine whether it is a true enterolith or a large gallstone, since the latter condition is encountered much more frequently. An examination of the gallbladder region for evidence of disease and a chemical analysis of the stone may lead to a definite conclusion. In a serious case it is not always desirable to make any exploration beyond the field of operation.

The following case is reported because of its rarity:

The patient, a traveling salesman, seventy-six years of age, was first seen May 28, 1930. For many years he had had attacks of gallstone colic, so severe in nature as to require hypodermics of morphine for relief from pain. For several weeks he had suffered from indigestion and abdominal pain which had kept him confined to the house, but he had not called a physician. When first seen he was having very severe abdominal pain, his temperature was 99°, pulse 100. There was moderate vomiting and the abdomen was distended. General abdominal tenderness was noted, chiefly over the lower right quadrant. Repeated enemata failed to produce any bowel action. The leukocyte count at this time was 18,000. A diagnosis of an acute abdomen with probable organic obstruction was made, and immediate operation advised. The patient insisted on postponing the operation until the arrival of relatives. At the end of this fifteen-hour delay, his general condition was decidedly worse.

Under gas anesthesia a long right rectus incision was made and the bowel exposed. The upper bowel was enormously distended and within the

lumen, about six feet below the duodenojejunal flexure, a hard round mass could be felt. Below the mass was collapsed empty jejunum. A longitudinal incision was made, the mass removed, and the upper bowel drained of several pints of dark, foul smelling fluid, after the method described by Holden.[4] A small tube was sutured into the lumen of the bowel for drainage and no attempt was made to explore the gallbladder region. The operation was of short duration. The patient regained consciousness but died in a few hours.

The mass removed in this case was 2 by 1½ inches in diameter; of an irregular oval shape; brownish in color and quite rough; it was easily broken with the finger, and seemed dry and hard throughout. In the center of the concretion was a distinct gallstone ⅜ of an inch in diameter. No attempt was made to secure a chemical analysis of the mass.

CONCLUSION

This case represents the result of neglected gallbladder disease. The formation of the enterolith with a gallstone as a nucleus is unusual, and it is difficult to understand why the stone should lie in the small intestine and not be carried through the bowel, since the gallstone itself was not of sufficient size to cause an obstruction. Reduced activity of the bowel in an aged man might have been a contributing factor. The patient's age and the duration of the obstruction rendered the chances of a successful operation small.

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IOWA CONFERENCE ON CHILD DEVELOPMENT AND PARENT EDUCATION

Announcement is made of the Seventh Annual Iowa Conference on Child Development and Parent Education which will be held in Iowa City, June 20, 21, 22, 1933. The conference is sponsored by the Iowa State Council for Child Study and Parent Education, with the cooperation of the Iowa Child Welfare Research Station and Extension Division of the University of Iowa, Iowa State College of Agriculture and Mechanic Arts, and the Iowa State Teachers College.

The conference program will emphasize the place of the public schools in child development and parent education. It is open to all persons interested in studying children. The speakers this year include men and women of prominence in their respective fields and the presentations will be by conference, lectures, symposia, and round table discussions. No admission fee will be charged for any of the conference sessions. An institute for child study leaders will be conducted June 19 to June 24.

FRAUDULENT REPRESENTATIONS AS TO THE SALE OF LIQUOR

Information has been received that one Robert S. Downs, at times going also under the names of Roland Watson, R. H. Wells, R. S. Stone, A. H. Davis, and Coleville, purporting to be a representative of certain concerns, has solicited doctors and dentists with the object of ostensibly effecting sales of liquor to them. He has a fake order form on which the names of the companies which he implies he represents are misspelled and which bears a permit number which does not exist. He takes the doctors' and dentists' orders, collects cash in payment for same, and then disappears.

The following is an exact copy of the card of Roland Watson, and you will note that the names of the companies shown are either misspelled or incorrectly stated:

"U. S. Industrial Alchol Corporation
Peroia, Ill.
Distributors
Frankford Distilleries
American Medical Spirits
Italian Swiss Colony Wineries
Roland Watson, Rep."

The misspelling is no doubt deliberate and for the purpose of avoiding prosecution in case of apprehension. Properly, the names should be shown as follows:

U. S. Industrial Alcohol Company
Frankfort Distillery
American Medicinal Spirits Company
Italian Swiss Colony

The individual referred to has no authority whatsoever from any of the above mentioned concerns, and his sole purpose is apparently to secure money by fraudulent representations.

Permittees authorized to purchase liquor should not give any orders therefor except to a person who is able to establish that he is the true and authorized representative of the concern he purports to represent, and should not pay any money to anyone under the circumstances indicated herein.

In the event the party referred to should approach any permittee soliciting an order for the purchase of liquor, information should be communicated to your local authorities in order that he may be apprehended, and notice should also be sent to the office of the Supervisor of Permits, St. Paul, Minnesota, in order that proper action can be taken.

State Health Commissioner's Page



Fluorides and Mottled Enamel in Iowa

Attention of men of science has recently been directed to problems associated with the worldwide distribution of a developmental defect of the teeth, characterized by a mottled appearance of the enamel and now regarded as being due to the toxic effect of fluorine in certain water supplies. This defect, when present in moderate or marked degree, is so striking that it could scarcely escape notice. All of the permanent teeth may be affected, their surface presenting a resemblance to chalk or unglazed china, in contrast to the smooth, semi-translucent character of sound enamel. In addition, brown stains may occupy pitted areas on the outer aspect of some of the front teeth.

Mottled enamel is described and the condition illustrated in a publication by the University of Arizona[1] and in *Colorado Medicine*[2]. This enamel defect was observed in children of Colorado Springs, in 1910, by H. A. Fynn and in 1915, by Frederick S. McKay, who noted the wide geographic distribution of mottled enamel. H. Trendley Dean, Dental Surgeon, United States Public Health Service[3], has recently reported the distribution of mottled teeth in this country.

From the beginning, certain water supplies were suspected as giving rise to mottled enamel. It was not, however, until E. V. McCollum and his associates in 1925, published the results of animal experimentation with sodium fluoride in the diet, that water could be definitely incriminated. In 1931, Smith and Smith in Arizona had produced mottled enamel in the teeth of young rats and demonstrated the presence of fluorine in certain water supplies. In the same year H. V. Churchill found fluorides present in water samples from Arkansas, in amounts varying from 2 to 13.7 parts per million.

The Iowa State Department of Health has been cooperating with dentists in a survey of the state, following the report of the occurrence of mottled enamel in school children at Ankeny, just north of Des Moines. Extensive experimental work on white rats and other animals has been going on at Ames during the past year. The State Hygienic Laboratory at Iowa City, through the Water Division, has for some time been making routine analyses of water specimens for fluorine content. Among a total of 60 samples sent in from suspected sources by the Bureau of Public Health Engineering, 18 specimens, all but three from public well supplies, have been found to contain fluorine to the extent of from one to eight parts per million. In addition to Ankeny, school children in Oakland, Stuart and Huxley are known to show the enamel dystrophy due to fluorides and it seems likely that other places in Iowa will be found to be endemic areas giving rise to mottled teeth.

Although the most prominent defect resulting from the toxic action of fluorides in drinking water, is that of the enamel, experimental work with animals[4] has shown that sodium fluorides in amounts of .03 per cent and over, added to the diet, inhibits growth, lowers the calcium retention in bones and otherwise alters calcium metabolism in nerve and muscle tissue.

The source of fluorine in the water of certain wells has been traced in Arizona, Colorado, Illinois and elsewhere, to minerals such as rock phosphates, to granite containing calcium fluoride crystals (fluorite) and to other mineral substances.

The occurrence of this condition illustrates the increasing significance of chemistry as related to medicine and also brings the subject of geology and those who are devoting a lifetime to that field into a more vital relationship with medical problems than has heretofore been realized.

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PREVALENCE OF DISEASE

Disease—	March, 1933	Feb., 1933	March, 1932	Most Cases Reported From
Diphtheria	41	45	50	Polk
Scarlet Fever	186	175	263	Polk, Franklin
Typhoid Fever	1	2	7	Boone
Smallpox	174	160	100	Dubuque, Clinton
Measles	42	20	13	Montgomery
Whooping Cough	65	42	102	Des Moines, Woodbury
Cerebrospinal Meningitis	10	6	8	Woodbury
Chickenpox	204	161	127	Des Moines
Mumps	292	190	174	Des Moines, Black Hawk
Poliomyelitis	1	0	2	Scott
Tuberculosis	38	26	36	(For State)
Undulant Fever	8	6	4	(For State)
Syphilis	213	165	169	(For State)
Gonorrhea	187	142	219	(For State)

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Vol. XXIII MAY, 1933 No. 5

ALCOHOLIC BEVERAGES AND INTOXICATION

The Cullen bill, after much debate and amendment, has been passed by both houses of Congress and signed by President Roosevelt. With an initial expenditure of over $22,000,000 in operations, equipment and advertising, our breweries have begun to produce 3.2 per cent beer for thirsty Americans. Distributors and retailers have spent nearly $50,000,000 in addition for the privilege of retailing this beverage.

Like other prohibitions, the prohibition against the use of alcoholic beverages has rankled many Americans. The number of protestants has increased until our national lawmakers appreciated that modification of existing laws was demanded. In order to give the public immediate action, the beer and light wine bill, known as the Cullen bill, apparently offered the best solution. Whether or not Americans will be satisfied by this modification remains to be determined by independent state action. Whether repeal of the Eighteenth Amendment is effected or not, alcoholism and intoxication will be debated by open-minded citizens, and the medical profession will be called as expert authority into the discussion. It appears timely, therefore, that we, as physicians, should investigate known authorities and be prepared to render scientific advice.

Laymen are prone to be swayed by religious beliefs and personal likes or dislikes in their premises regarding the physiologic effects produced by the use of alcoholic beverages upon longevity and inheritance, and there appears to be no unanimity even in the medical profession regarding this problem. Less than a decade ago, Raymond Pearl of Johns Hopkins University, drew fire from the prohibition ranks by the publication of his six year study concerning the influence of alcohol on longevity[1], in which he reported that alcoholized fowls lived longer than those fed upon plain food and water. From these experimental data and his studies upon a very large and homogeneous sample of the working class population of Baltimore, he stated that the moderate drinking of alcoholic beverages did not shorten life. On the contrary, moderate steady drinkers exhibited somewhat lower rates of mortality and greater expectation of life than did abstainers. This superiority, it is true, was not great in the moderate drinker and Pearl stated that the figures were possibly not significant. However, it did seem to disprove a popular belief in many quarters that the use of alcohol, even in moderate quantities, always shortened life, and became a scientific fact for those whose personal beliefs made it seem desirable to embrace these statements.

Pearl's work seemed quite convincing to him, particularly since he found that other scientists, working with common laboratory animals, such as guinea pigs, fowls, rats, mice, rabbits, frogs, and insects, had confirmed his observations. In each instance, according to Pearl, the moderate use of alcohol was shown to have a beneficial effect upon the animal. He states: "This beneficial effect appears to be produced chiefly as a result of the remarkably sharp and precise selective action of this agent (alcohol) upon the germ cells and developing embryos, killing off the weak and defective, and leaving the strong and sound to survive and perpetuate the race." Apparently, then, from this statement Pearl believed that alcohol did have a detrimental effect upon the germ cells and developing embryo, but that its effect became a beneficence to the race in further natural selection.

Physiologists have been unable to accept the idea that an alcoholic effect upon the individual cell or embryonic tissue could be sufficiently marked to produce cell death or embryo death and still be conducive to longevity in the adult. For this reason, the work of Pearl was not entirely accepted, and scientists have continued their researches upon the effect of alcohol, using both experimental animals and human beings for their experiments.

Recently, Haven Emerson, et al., has delved into this subject and concluded as a result of personal observations and those reported in the literature that total abstainers, who have always been so, are, on the whole, longer-lived than non-abstainers.[2] He states: "Those who drink moderately, say an average of two glasses of beer or one glass of whiskey a day, have a higher mortality than the average, partly due to a percentage of them eventually exceeding this moderate consumption." This statement has been made after a careful review of the researches recorded by Pearl, and we feel that the present study can be accepted as more authori-

tative because of its wider scope and the observations which have intervened since Pearl's original work.

However, generally speaking, the public is not so much concerned in the effect of alcohol on longevity, as they are in the amount of alcohol required to constitute intoxication and the more immediate effects of the occasional and prolonged use of alcohol upon the human mechanism. It has been determined that extremely large doses of alcohol, resulting in a concentration of about five milligrams of alcohol per cubic centimeter of blood, lead to a state of coma with complete unconsciousness, the traditional picture of the "dead drunk." This is very close to the lethal concentration. It has been observed that death usually occurs when the concentration of alcohol in the blood lies between six and ten milligrams per cubic centimeter. This severely toxic action constitutes acute alcoholic poisoning. Less marked chemical stages of intoxication are observed, but when the concentration of alcohol drops below two milligrams of alcohol per cubic centimeter, a clinical stage of alcoholism does not exist. It is a common observation that some individuals are able to drink many times the amount that others can without showing the same effect. It is further observed that the same individual can consume larger amounts of alcohol at one time than at another, without showing the alcoholic effect. For this reason, it is hazardous to attempt to state upon the basis of alcohol consumption the amount of the particular alcoholic beverage which will be required to produce clinical intoxication. Opinions will continue to differ widely as to just when a drinker ceases to be normal and when he shows sufficient effect of alcohol to be characterized as intoxicated or drunk, and no doubt the significance of these facts will vary markedly under different conditions. Apparently it is not the duty of the medical profession to determine when a person becomes intoxicated in the sense of revolting against the laws of society because of his indulgence in alcoholic beverages, since it must readily be appreciated that the ingestion of even the smallest amount of alcoholic beverage will prompt anti-social action in one individual, whereas another may consume a sufficient amount to be clinically and medically intoxicated from alcohol and still not violate social laws. Legal action will be governed by the reactional conduct of the individual, rather than by the clinical diagnosis of the stages of intoxication.

Regardless of the attitude taken by the laity concerning the use of alcohol as a beverage, scientists will continue to regard alcohol as a protoplasmic poison. To the toxicologist "Alcohol is an important and widely used poison." Professor Yandell Henderson, of Yale University, who acted as toxicologist for the Congress of the United States, and upon whose application of the "mass law"* the alcoholic content of the new beer was fixed at 3.2 per cent, recently stated before a meeting of medical scientists that, if the Eighteenth Amendment is repealed, the stronger alcoholic beverages must absolutely be separated from the weaker ones and classed with the narcotic drugs. He believes that the sale of beverages of great alcoholic content must be controlled by laws patterned after the Harrison Act regulating the use of morphine and cocaine. How far our lawmakers will continue to follow the counsel of the "advisory toxicologist to Congress" may be determined by future legislation.

In medical practice the prolonged or immoderate use of alcohol is recognized in many clinical forms. Alcoholic gastritis, alcoholic sclerosis of the liver, delirium tremens, peripheral neuritis of alcoholic origin, and fatty degeneration of the vital organs from the use of alcohol, are entirely supported by both clinical and experimental evidence. "In short, both in its immediate effect and in its slower and more chronic manifestations, alcohol is the most dangerous poison widely included in the human diet, affecting nearly every tissue of the body, but having a particularly toxic action on the tissues of the central nervous system. Recognition of this fundamental fact must underlie consideration of any other aspect of alcohol problems."

Alcoholism has such a variety of aspects that it is not a matter of great difficulty to array much experimental and clinical evidence to support almost any theory. It is obvious to the student of this subject that one may quote apparently authoritative sources for any position which he wishes to assume. Because of this fact, however, one is not justified in assuming that such arguments will transform the pharmacology of alcohol. If alcohol does lower longevity, and evidently careful observations support this view, then quoting Tom, Dick, or Harry does not alter the fact. The physician should not assume either the attitude of the prohibitionist or the anti-prohibitionist. These classifications in actual practice seem to have more bearing on what kind of alcohol will be drunk than whether it is harmful or not. Every toxicologist will agree that pure ethyl alcohol is less dangerous than methyl alcohol, the higher alcohols classed as fusel oil, or that heterogeneous group of intoxicating (poisoning) fluids, concocted during the past fourten years of "the noble experiment," well grouped as "rot gut." These are not the problems

* Any chemical in high concentration acts powerfully, but when sufficiently diluted it loses its harmful action.

of this discussion. The physician must remain a scientist, and as such must seek for scientific facts.

Some of the facts proved by careful observation are:

1. The prolonged use of alcohol in any amount tends to, or actually does, shorten the span of expectancy.

2. The prolonged or excessive use of alcoholic beverages produces degenerative changes in many of the vital organs, particularly those of the central nervous system.

3. The safest criterion for clinical intoxication lies in the determination of the alcohol concentration in the blood.

4. The legal aspect of the problems of intoxication does not rest within the province of the physician, but will continue to be determined upon the conduct of the individual in his relation to society.

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THE CHEMISTRY OF THE VITAMINS

No chapter in medical history contains more romance than that dealing with the heterogeneous class of chemical substances known as the vitamins. Observed first in their deficiency and recognized in therapy as early as the beginning of the eighteenth century, their identity, as elements extraneous to the previously considered essential food elements (proteins, fats, carbohydrates, water and salt), was first announced by Hopkins in England, and by Osborne, Mendal, McCollum and Davis in this country less than two decades ago.[1]

In 1720 Kramer wrote in his *Medicina Castrensis* that while neither medicine nor surgery could give relief in scurvy, the juices of fresh fruits such as oranges, lemons, and citrons would cure the disease. Following closely upon this original observation, studies on polyneuritis led to a recognition of its nutritional etiology and prompted Eijkman in 1906 to apply the designation, nutritional polyneuritis, to the disease.

Since the time of these early observations, clinical attention has been directed to the vitamins, both in health and in disease, and our knowledge regarding their physiologic properties has been largely developed. As so often happens in medical discoveries, the vitamins were known clinically in the production of disease processes long before any information was gained concerning their chemical nature.

As the name vitamin implies, they were originally thought to belong to the amine group of chemical substances, and the prefix "vita" carried an exaggerated implication of their unique responsibilities for life and vitality. The vitamin theory of the present day has grown out of, and developed around the study of the antineuritic factor, but in view of recent developments, it seems that greater effort should have been extended in determining the chemical nature of this group. This antineuritic vitamin, now termed Vitamin B, was first accurately described by Eijkman in his studies of beriberi and experimental polyneuritis in 1906. He conducted experiments designed to throw light upon the chemical nature of this antineuritic substance, and found that it was soluble in water, was dialyzable, and was not readily precipitated from water solutions by alcohol. Eijkman's work laid the foundation for further chemical study by other observers.

Funk, in 1911, offered evidence indicating that Vitamin B could be extracted from dried, pressed yeast by hydrolysis with 20 per cent sulphuric acid and still retain its curative properties. He concluded that his experiments indicated that this vitamin is a free base, probably belonging to the pyrimidin group, analogous to uracil and thymine, and possibly a constituent of nucleic acid.

Later workers have isolated chemical substances showing curative effectives to a lesser or greater degree, each in turn adding something to the sum total of the knowledge concerning the chemistry of this vitamin. In 1926 a crystalline antineuritic substance was isolated and its empirical formula stated. In 1928 synthetic crystalline compounds were prepared which were found to have temporarily curative values for polyneuritic pigeons. The question is still open as to whether Fahashi's positive (or temporary) results obtainable from his synthetic glyoxaline preparation have solved the identity of Vitamin B, but certainly the chemists are nearing their goal.

As recently as 1930, however, Drummond, reflecting the uncertainty which still existed concerning the chemical nature of Vitamin B after nearly twenty years of intensive research in many laboratories, stated: "There are grounds for some optimism regarding the future researches into the nature of the antineuritic Vitamin B. It appears to be a basic substance of relatively stable composition, and it should therefore be only a matter of carrying out the fractionization on a sufficiently large scale to obtain enough of the active substance, or substances, to establish their nature and constitution.

While this survey of the chemical nature of Vitamin B has only touched some of the high spots in this voluminous research, it indicates the perseverance with which this problem has been pursued.

Vitamin A, the fat-soluble vitamin, readily ob-

tained from cod liver oil, has been subjected to a vast amount of chemical study, particularly by Drummond, Channon, and Coward. Their observations have led them to believe that Vitamin A is an unsaturated alcohol of the sterol group.

At the last meeting of the American Chemical Society, Seidell and Smith, of the United States National Institute of Health, announced the crystallization of Vitamin D in a pure state. These observers obtained their crystalline substance from a concentrate of brewer's yeast, after having precipitated out substances of no vitamin value by the use of picric acid. The exact chemical formula of the substance isolated has not been determined, although it has been shown that as little as .0015 of a milligram of this substance was sufficient to cure rats suffering from a deficiency of Vitamin D. If the observations of Seidell and Smith are subject to confirmation, the chemical identity of Vitamin D will no doubt be speedily established and, with the formula determined, its synthesis in purer form may be expected.

During the past year American observers following the pioneer studies of Holst and Frolich[2] have apparently proved that the antiscorbutic Vitamin C is hexuronic acid (ascorbic acid), and no doubt the synthesis of this substance will follow promptly.

At about the same time independent observers prepared a crystalline substance from the cortex of the suprarenal gland which in assay has proved to be the most potent source of the antiscorbutic factor thus far investigated, being three times more potent than orange juice, long recognized as rich in this factor.

"As the comparison on the basis of the bio-assay corresponds to the relative amount of ascorbic acid determined in these factors and isolated from them, it appears that Vitamin C is identical with ascorbic acid or is a substance closely similar to it in distribution and in chemical nature."

The importance of this observation has not yet been determined, but it would suggest at least that the antiscorbutic Vitamin C is essential for the functioning of the cortical substance of the suprarenal gland and that the gland itself controls the mechanism of protection against scurvy.

It would appear, then, that we are fast approaching the time when vitamin deficiency can be met by the administration of chemically pure synthesized or extracted vitamins, and that the dose of these pure products may become subject to minute exactness in measurement. New developments in the field of biochemistry during the past fifty years give promise of still greater discoveries for the future, and assure to this field of medicine the background of scientific exactness, which will materially advance vitamin use in clinical medicine. When the physiologist, the clinician and the chemist can travel hand in hand, each keeping pace with one another, permanent progress is inevitable. Nature will reveal her secrets to this triumvirate, and human woe will be lessened.

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PUBLIC HEALTH LEGISLATION IN THE 45TH GENERAL ASSEMBLY

The Forty-fifth General Assembly has adjourned until the special session which will meet in August. Due to the heavy program of legislation concerning taxation and government reorganization, public health bills received scant attention.

The appointment of a committee of nine under House Joint Resolution No. 7 to "seek the cause or causes of at least one of Iowa's present misfortunes, viz., unprovided for sick and suffering . . ." and the submission of the committee's comprehensive report (printed in the April issue of the Journal) with its accompanying bills, obviated the necessity of the introduction of bills by the Committee on Public Policy and Legislation in accordance with the instructions of the House of Delegates in the 1932 annual session. Four of the members of the joint committee are members of the Iowa State Medical Society; Dr. E. E. Munger, chairman, Dr. A. W. Erskine, secretary, Dr. O. J. Fay and Dr. W. A. Sternberg. The committee has been continued and the bills which it has introduced will undoubtedly be acted upon at the August session. These bills are included in the annual report of the Committee on Public Policy and Legislation and will be printed in the July issue of the Journal.

It was the consensus of the Forty-fourth General Assembly, following the defeat of both medical and osteopathic bills, that the members of the medical profession and the osteopaths should agree upon compromise measures that would be satisfactory to both. In October of last year a compromise bill was offered to the osteopaths of Iowa which would have absorbed into the medical profession the osteopathic surgeons now practicing in the state and those who in the future would pass the state board examination in medicine and surgery; would have licensed the present osteopathic physicians to practice medicine, but would not have authorized them to practice surgery; would have explicitly defined major surgery; would have defined drugless healing and set forth the necessary qualifications for practicing drugless healing and the requirements of colleges teaching drugless healing. The bill in effect opened the doors of the

practice of medicine to all osteopaths, providing they met certain qualifications. It offered a compromise that was fair in every particular. The Iowa Society of Osteopathic Physicians and Surgeons, however, refused to accept the measure and introduced into the legislature House File 255, which would have given to all Iowa osteopaths the rights and privileges of the legitimate practitioner of medicine and surgery, without increasing their educational requirements. On March 17 the bill was recommended for indefinite postponement by the health committee of the House and was indefinitely postponed on March 18.

Senate File 248 and its companion bill, House File 273, sponsored by the Committee on Public Policy and Legislation of the Iowa State Medical Society, were introduced respectively in the Senate and House on the 10th and the 13th of February. This bill would have explicitly defined osteopathy and would have required that an osteopath pass the same examination in surgery as is now given by the board of medical examiners, if he wished to practice surgery, and all other osteopaths would have been prohibited from giving or prescribing any vaccines, serums, drugs or medicine included in materia medica, or from practicing operative surgery. House File 273 was withdrawn from the health committee of the House on March 13, but no action was taken on it and it was referred to the sifting committee on March 18, from which is was never withdrawn. Senate File 248 was recommended for passage by the Senate health committee on February 21 and placed on the calendar. On March 16 it was referred to the sifting committee, but was referred out by the sifting committee on March 23. It came up for discussion on the regular calendar on March 29. Senator Pendray of Jackson County moved that it be re-referred to the sifting committee, but a roll call resulted in eighteen votes for re-referring and thirty against. This of course represented a move by the osteopaths to kill the bill and those who voted to re-refer the bill (the only record of votes obtained in the session) were Calhoun of Keosauqua, Carden of Winfield, Coykendall of Shenandoah, Elthon of Fertile, Hicklin of Wapello, Husted of Truro, Knudson of Ellsworth, McArthur of Mason City, Nelson of Nevada, Pendray of Maquoketa, Reese of Marshalltown, Schmidt of Iowa City, Shangle of Oskaloosa, Frank M. Stevens of Garden Grove, Roy E. Stevens of Ottumwa, Topping of Burlington and Wenner of Waterloo. The bill did not receive any further action until April 7, when Senator Irwin of DeWitt moved to consider it. Senator Beatty of Sigourney moved that action be deferred but that the bill be retained on the calendar. His motion was lost. Previous to Senator Irwin's motion, Senator White of Vinton moved that all bills on the calendar after adjournment on that day be re-referred to the sifting committee. This motion carried. By a skillful parliamentary ruse, action on Senate File 248 was avoided when Senator Harrington of Sioux City moved that the Senate adjourn until the next day. Under the motion made by Senator White, adjournment carried with it the re-reference of all bills to the sifting committee, including Senate File 248.

The concentrated effort of the osteopaths to secure the passage of House File 255 and to defeat House File 273 and Senate File 248 was an exhibition of high-priced and energetic lobbying seldom equalled in the Iowa legislature.

Two new cults sought legislative license in the Forty-fifth General Assembly. House File 302 was introduced by Johnson of Linn County and was intended to provide for the licensing and examination of naprapaths and the appointment and maintenance of a board of naprapathic examiners There are at present three naprapaths in Iowa, all of whom were enjoined by the Supreme Court in 1932 from continuing their practice. An amendment to House File 302 was offered by the health committee of the House, which would have legalized the practice of naprapathy by the three persons engaged in the practice, but would not have permitted others to be licensed. This bill was lost in the sifting committee.

A second cult, known as the naturopaths, also sought similar legislation, but their bill likewise was lost in the sifting committee.

A bill to provide liens in favor of hospitals furnishing care, treatment and maintenance to persons injured in accidents was introduced and defeated.

Another bill of interest to the medical profession, which was defeated, was one providing that physicians could serve on County Hospital Boards.

A more detailed report of legislative activities will be given to the House of Delegates at the annual session by the Committee on Public Policy and Legislation.

MILITARY SURGEONS CLUB

Members planning to attend the Military Surgeons Club Banquet at 6:30 p. m., on Wednesday, May 10, during the annual session, please return reservation cards to the central office, as we are expecting a large attendance, and want to be certain that arrangements are made for everyone.

Aaron C. Conaway, M.D., Chairman.

THE VOLUNTARY CHARITABLE HOSPITAL

Public health agencies throughout the land are sounding the note of alarm over the dearth of funds available for charitable hospital work, and it appears that their alarm is well founded.

According to statistics prepared by the American Medical Association, 110 hospitals closed their doors in 1931 and there are now many other hospitals considering such a move because of financial stringencies. While the number of hospitals which have been forced to suspend activity is less than 2 per cent of the voluntary charitable hospitals operating in the United States, this figure does not reflect with any degree of accuracy the number of beds which have been closed to charity patients. Many hospitals who have continued active operation have found it necessary to close a large number of their wards and private rooms.

Statistics from the American Hospital Association indicate that the spread between income and expense in the voluntary charitable hospitals has been greatly increased in the last few years. On the average they are now giving more than 30 per cent of their services to patients who cannot pay the cost of their care, while the income has decreased from 15 to 20 per cent. In the past they have received from the American public, some $100,000,000 in contributions for the support of this free work. Because of economic conditions this figure has been markedly lowered during the past year, with a corresponding decrease in the activities of these institutions.

The work of these hospitals is of particular importance when we consider that many of them devote all or part of their bed space to the treatment of incipient tuberculosis or conditions predisposing to tuberculosis. Certainly it is far more economical, as well as much more humane, to prevent tuberculosis than to cure it. With 12,000,000 people unemployed it is especially important that preventive work and out-patient facilities for those who have not become hospital-bed patients, should be maintained at its highest efficiency.

From the National Committee for Mental Hygiene comes the appeal for the continuation of the voluntary charitable hospitals, in appreciation of the great services which these institutions render every community. To the man who has a family but no job, frequently the assurance of good hospital care in case of sickness is a bulwark against utter despair. The public, therefore, cannot afford to let the hospitals lose their present determination to serve the sick poor at all costs.

IOWA HOSPITAL OFFICIALS MEET

The Association of Iowa Hospital Officials held a joint session in Marshalltown April 19th and 20th with the Iowa Hospital Association, the Iowa Dietetic Association, and the Iowa Record Librarians Association.

Both in and out of state physicians and hospital officials addressed the joint session. The Marshalltown Deaconess Hospital Dramatic Club furnished entertainment. The banquet address was given by Dr. C. Rufus Rorem, of the Julius Rosenwald fund of Chicago, who spoke on the subject "Paying for Medical Care."

Officers elected by the Iowa State Hospital Association at their closing session were Clinton F. Smith of Waterloo, president; T. P. Sharpnack of Des Moines, first vice president; Miss Mary L. Elder of Burlington, second vice president; E. C. Pohlman of Iowa City, secretary; R. A. Nettleton of Des Moines, treasurer; Robert E. Neff of Iowa City, and F. P. G. Lattner of Dubuque, trustees for the term ending 1936; Miss Margaret H. Rose of Washington, trustee for term ending 1934.

UNIVERSITY OF NEBRASKA POSTGRADUATE COURSES

The University of Nebraska College of Medicine will offer its usual postgraduate course from May 15 to May 20, inclusive. This is the week preceding the annual meeting of the Nebraska State Medical Society in Omaha. The course this year will be offered under the auspices of the Departments of Medicine, Neuropsychiatry and Dermatology.

The laboratories, especially the Departments of Anatomy, Pathology and Bacteriology, will be available for use at all times, likewise the library. The fee for this course will be ten dollars ($10) and the number accepted will be limited to thirty.

AMERICAN CONGRESS OF PHYSICAL THERAPY

The twelfth annual meeting of the mid-western section of the American Congress of Physical Therapy will meet at the Hotel Jefferson in Peoria, Illinois, May 15, 1933. Ten papers dealing with various phases of physical therapy will be presented by essayists of national prominence.

Those interested particularly in this phase of treatment are urged to attend the meeting. Details can be obtained either from Frederick L. Wahrer, M.D., Marshalltown, Iowa, chairman of the section, or F. H. Ewerhardt, M.D., St. Louis, secretary of the section.

THE PRESIDENT'S MESSAGE

The Eighty-second Annual Session of the Iowa State Medical Society is about to convene. The program, which was published in the April issue of the JOURNAL, appears to rank well with any ever presented. The meeting will be in Des Moines, the most central meeting place in the state, and the local committee on arrangements has provided for its presentation in the manner it deserves. Plans have also been made for the entertainment of the members in a way that will be worthwhile. Therefore, we solicit a large attendance. The state meeting is so often the only opportunity you have to meet your old friends and former school mates, and you should take advantage of it. You will have a good time in addition to augmenting your scientific knowledge.

Furthermore, organized medicine needs your presence and counsel. Whether you realize it or not, the Iowa State Medical Society is the most important organization of which you are a member. It does everything in its power to further your interests, to secure medical legislation, to increase your knowledge, and to educate the general public on health subjects that they may know the importance of scientific medicine and the value of the regular practitioner.

The delegates are especially urged to be present and to arrange their affairs so that they can attend all meetings of the House. There are many matters of vital importance to be considered, not the least of which is the matter of legislation. It is hoped that we can put through our legislative program at the special session of the legislature in August, and your advice and help are needed in planning this action. Your advice, your assistance and your influence are also required to ensure passage of our bill by the legislature, after it has been brought up for consideration.

H. N. Bocock

President.

SOCIETY PROCEEDINGS

Black Hawk County

Quitman U. Newell, M.D., assistant professor of clinical obstetrics and gynecology at the Washington University School of Medicine, St. Louis, addressed members of the Black Hawk County Medical Society, Tuesday, April 18, on the subject, A Plea for the Early Recognition of Uterine Cancer, with some Remarks on Treatment. The paper was illustrated with lantern slides, and was discussed by the following physicians: Erwin von Graff, M.D., and E. D. Plass, M.D., of Iowa City; John Hamilton, M.D., and Florence T. Johnston, M.D., of Cedar Rapids, and W. H. Bickley, M.D., of Waterloo. E. F. Stevenson, M.D., of Waterloo, presented a short paper on Endocarditis, which was discussed by John L. Kestel, M.D., also of Waterloo.

Buchanan County

Friday, April 14, the Buchanan County Medical Society held its regular monthly meeting at the Hotel Gedney in Independence. Howard L. Beye, M.D., of Iowa City, was the speaker of the evening, addressing the group on Gallbladder Disease.

Clinton County

At the April meeting of the Clinton County Medical Society, Arno B. Luckhardt, M.D., of the department of physiology of the University of Chicago, gave an illustrated talk on Physiological Interpretations of the Syndromes observed as a result of Lesions in and about the Hypophysis. This was exceedingly interesting and was enjoyed by all those present. Dr. Luckhardt is exceptionally well versed on his subject and gave us a new conception of some of the endocrinologic syndromes, to which our attention is recently being directed.

Thursday, May 4, Stanley Gibson, M.D., of Chicago, will speak on Nose and Throat Infections in Children.

Ralph F. Luse, M.D., Secretary.

Dallas-Guthrie Society

The regular meeting of the Dallas-Guthrie Medical Society was held at Panora, Thursday, April 20, with the following program: Clinical Tuberculosis, H. W. Smith, M.D., of Woodward; Case Report—Cretin, C. A. Nicoll, M.D., of Panora; Case Report—Facial Paralysis Following Injury, M. H. Brinker, M.D., of Yale.

S. J. Brown, M.D., Secretary.

Davis County

The Davis County Medical Society met Monday, April 3, in the office of Dr. J. C. Stone, at Bloomfield, and the following program was presented: Sinus Disease, C. D. Fenton, M.D., Bloomfield; The Doctor and the Nurse, Miss Laurel Leyda, registered nurse of Bloomfield; Bovine Tuberculosis, H. W. Conner, D.V.M., of Bloomfield.

H. C. Young, M.D., Secretary.

Decatur County

J. E. McFarland, M.D., of Leon, furnished the scientific program for the Decatur County Medical Society, when that group met Friday, March 31, taking for his subject, The Laboratory: Its Technic and Findings in Relation to the Practice of Medicine.

Dickinson County

Members of the Dickinson County Medical Society met for a dinner meeting, Thursday, March 30, at the Antlers Hotel in Spirit Lake. A symposium on Diseases of the Heart was presented with Peter G. Grimm, M.D., of Spirit Lake, and Don E. Rodewig, M.D., of Spirit Lake, as the two speakers.

Dubuque County

Tuesday, April 11, the Dubuque County Medical Society, met in Dubuque, and Theodore Stuckart, M.D., of Dubuque, read a paper on The Treatment of Dementia Paralytica with Malaria. A lengthy discussion followed the presentation of the paper.

Floyd County

The regular meeting of the Floyd County Medical Society was held in Charles City, Tuesday, March 28. C. H. Cords, M.D., of Rudd, gave an interesting paper on Vincent's Angina. This was followed by an instructive presentation of Epidermophytosis by C. W. McQuillen, M.D., of Charles City. There was a general discussion of both papers.

J. B. Miner, Jr., M.D., Secretary.

Humboldt County Annual Meeting

Friday, April 21, the Humboldt County Medical Society, held a reorganizational meeting, and elected the following officers to serve the society during 1933: Dr. Ivan T. Schultz of Humboldt, president; Dr. R. W. Beardsley of Livermore, vice president; Dr. Arthur E. Jensen of Humboldt, secretary and treasurer; Dr. W. M. Shipley of Ottosen, delegate; and Dr. James K. Coddington of Humboldt, alternate delegate.

Jackson County

The Jackson County Medical Society met Friday, April 7, at the Maquoketa Public Library. Two excellent papers were given and much discussion followed. The first paper was by F. O. Kershner, M.D., of Clinton, on Cancer of the Stomach, with an x-ray demonstration; the second, by Walter Cary, M.D., of Dubuque, on The Toxemias of Pregnancy. The Woman's Auxiliary met at the home of Dr. and Mrs. Ryan.

George C. Ryan, M.D., Secretary.

Johnson County

A. M. Schwitalla, Ph.D., dean of the faculty of medicine of St. Louis University, addressed the Johnson County Medical Society, Thursday, April 6, on The Cost of Medical Care. Dr. Schwitalla was a member of the National Committee on the Costs of Medical Care, and one of the signers of its minority report. He presented his reasons for dissenting from the opinions of the majority of the committee, in a very eloquent and convincing manner, emphasizing particularly the point that any endeavor to standardize and measure medical practice inevitably reduces it to the level of a trade. Dr. Schwitalla's remarks were received with much enthusiasm.

Horace M. Korns, M.D., Secretary.

Linn County Meetings

Joseph Brown, M.D., of Des Moines, representing the Polk County Medical Society in an exchange program, read his very interesting paper on Menstrual Disorders, before the Linn County Medical Society, Thursday, April 13. The subject was well handled and directed our attention to an aspect of the subject, which is not often considered.

Thursday, May 18, Richard L. Sutton, M.D., of Kansas City, will be a guest of the society, conducting a skin clinic from 4:00 p. m. to 5:30 p. m. Following this clinic, a dinner will be given at 6:30 p. m. in honor of Dr. Sutton and our recently elected associate and honorary members from the heads of the different departments of the University Hospitals. After the dinner, Dr. Sutton will again address the group, on his trip through the Arctic last summer.

Thomas F. Hersch, M.D., Secretary.

Marshall County

J. B. Synhorst, M.D., of Des Moines, was guest speaker at a meeting held by the Marshall County Medical Society, Tuesday, April 4, taking for his subject, The Treatment of Goiter.

Polk County

The regular meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held in the West Ball Room of the Hotel Fort Des Moines, Tuesday evening, April 25. Dr. James A. Downing was elected a delegate to the House of Delegates of the Iowa State Medical Society to succeed Dr. Thomas A. Burcham, who resigned. A very interesting and instructive scientific program was presented by William R. Hornaday, M.D., and W. Eugene Wolcott, M.D. Dr. Hornaday read a paper on Recent Changes in Urology, which was discussed briefly by Drs. Clifford W. Losh, Leonard A. West and Isaac H. Odell. Dr. Wolcott gave an illustrated lecture on Mixed Vaccine in the Treatment of Chronic Infectious Arthritis and supplemented the lecture with a clinical demonstration of approximately forty patients being treated by this method. The subject was briefly discussed by Dr. Walter L. Bierring. The meeting was well attended by about one hundred members, many of whom remained for a social hour of cards.

L. K. Meredith, M.D., Secretary.

Sac County

The Sac County Medical Society met Tuesday, April 4, at Sac City, in the office of Dr. William J. Findley. Louis B. Amick, M.D., of Sac City, read a paper on Treatment of Osteomyelitis by the use of Maggots, and presented two cases. J. R. Dewey, M.D., of Schaller, read a paper on Basal Metabolism in General Practice. General discussion followed both papers. The secretary was elected delegate to the annual meeting.

J. R. Dewey, M.D., Secretary.

Scott County

Tuesday, April 4, the Scott County Medical Society met in regular session for a dinner meeting, at which Howard L. Beye, M.D., of Iowa City, was the speaker. Dr. Beye's subject was Some Problems in the Diagnosis and Treatment of Lesions of the Biliary Tract.

H. A. Meyers, M.D., Secretary.

Woodbury County

The regular monthly meeting of the Woodbury County Medical Society was held Tuesday, March 28, at the Martin Hotel in Sioux City. Miss M. E. Smith of New York City, addressed the society on behalf of the National Society for the Prevention of Blindness. The remainder of the meeting was devoted to a thorough discussion of the county contract plan of caring for indigent patients, and the society voted in favor of adopting such a plan for Woodbury County.

Lawrence E. Pierson, M.D., Secretary.

Iowa Clinical Medical Society

The spring meeting of the Iowa Clinical Medical Society was held in Council Bluffs, Saturday, April 15, and new officers elected as follows: Dr. Benjamin F. Wolverton of Cedar Rapids, president; Dr. Clarence W. Baldridge of Iowa City, vice president; and Dr. Judd Shellito of Independence, secretary and treasurer. The following case histories were presented as part of the scientific program: Hemorrhagic Nephritis with Edema, Jack V. Treynor, M.D.; Chronic Meningitis, W. E. Ash, M.D.; Peripheral Vascular Disease, Aldis A. Johnson, M.D.; Tularemia, and Renal Glycosuria, Raymond Rice, M.D.; and Malignant or Idiopathic Purpura, Gordon N. Best, M.D. All essayists were of Council Bluffs.

Southwestern Iowa Postgraduate Medical Association

The regular meeting of the Southwestern Iowa Postgraduate Medical Association was held in Clarinda, Monday, April 10, with G. Alexander Young, M.D., of Omaha, and W. E. Ash, M.D., of Council Bluffs, as guest speakers. Dr. Young spoke on The Common Mental Conditions Met by the General Practitioner, and Dr. Ash read a paper on The Malarial Treatment of Syphilis.

INTERESTING NEWS
In Brief

A serum has been perfected at the University of Cincinnati for the treatment of undulant fever.

In the past two years more cases of undulant fever have been reported in New York than in any other state.

In recent years in the United States diphtheria has maintained a death rate seventy times as high as that of small-pox.

Newspaper reports indicate that six cases of malta fever exist in Sioux City and that all cases can be traced to the same source of infection.

With the signing of the Copeland-Celler bill by President Roosevelt, the restriction as to the amount of liquor a physician may prescribe, has been lifted.

A Chicago hospital has recently purchased a giant x-ray machine with a voltage of 800,000 and a radiation out-put equivalent to radium worth $75,000,000.

According to Dr. Walter B. Cannon of Harvard, smallpox in former times was essentially a disease of children, and, for this reason, was called "child pox."

Applicants for admission into the freshman classes of American Medical Colleges numbered 12,280 in 1932. Of this number 7,357 applicants were accepted.

While the death rate from cancer has mounted among white men over 45 years old, the cancer death rate among white women of the same age level has not changed.

In the annual report of the Department of Health of Mason City, a total of 247 cases of communicable diseases are registered as having occurred during the past fiscal year.

Anonymous gifts of $300,000 and $25,000 have been received by two American universities for research in surgery and the study of cancer on the living subject, respectively.

The Commonwealth Fund has granted $25,000 to the Tulane University School of Medicine to continue the Hutchinson Memorial Clinic for the training of senior medical students.

Investigations by British scientists indicate that the exact chemical nature of the substance in coal tar which produces cancer has been discovered and can now be produced synthetically in the laboratory.

Byron B. Davis, professor of surgery in the College of Medicine of the University of Nebraska, was honored at a testimonial luncheon by the Omaha Chamber of Commerce for his services to the city of Omaha.

Studies conducted in the Vadsö district in the extreme north of Norway indicate that these fisherfolks were apparently unharmed by the enormous amount of fish and cod liver oil which they consume regularly.

Members of the Vienna Medical Faculty, who have in the past given medical testimony all too freely, regarding the "curative" value of yeast, have been officially and sharply reproved by their Dean, Prof. Dr. Ernest Pick.

Deaths from pellagra, "hardtime" disease, have unexpectedly decreased enormously during the present depression. Vegetable gardens and yeast seem to have effectually routed the former spectre of economic depression.

The Spencer Hospital presented an enviable financial statement at the recent annual meeting of the hospital association. Expenses for the year were $12,578.38 and the total income $10,228.86, with outstanding bills believed collectable of $3,994.90.

Dr. William Muhlberg of Cincinnati, vice president and medical director of the Union Central Life Insurance Company and past president of the American Association of Life Medical Directors, has been made a member of the Board of Trustees of the National Health Foundation.

A recent investigation conducted by a Philadelphia school indicated that nine out of seventy junior medical students had defective color vision. This observation is of importance since its recognition permits special instruction to prevent medical accidents resulting from this defect.

PERSONAL MENTION

Dr. **Charles B. Taylor** of Ottumwa, president elect of the Iowa State Medical Society, spoke on "Some Observations on the Present Situation," before a joint meeting of the Ottumwa and Washington Y's Men's Clubs, at Ottumwa, Tuesday, April 17.

Dr. **Frederick J. Swift** of Maquoketa, who for the past few months has been representing Jackson county in the House of Representatives of the Forty-fifth General Assembly, has recently been appointed Deputy Commissioner of Health, and will begin his new duties in that office, July 1.

Dr. **Sumner B. Chase**, eye, ear, nose and throat specialist of Fort Dodge, and Dr. Roland Stahr, heart specialist of Fort Dodge, spoke on their specialties, respectively, at the regular meeting of the Parent Teachers Association, Wednesday, March 29.

Dr. **Arthur Steindler** of the College of Medicine, State University of Iowa, conducted a clinic at the

annual meeting of the International Society for Crippled Children, held in Wichita, Kansas, during the week of April 17 to 21.

Dr. Royal French of Marshalltown, has returned from a world tour, which included a six weeks' visit in Shaikarpur, India, where he made extensive studies of eye conditions among the natives.

Dr. J. A. Jefferson, negro physician of Des Moines, spoke before the Colored Community Service Clinics, Sunday, April 19, on "The Importance of Infant Care."

Dr. Roger Flickinger has arrived in Mason City from Detroit, where he had been connected with the Henry Ford Hospital for the past four years. Dr. Flickinger is coming to Park Hospital, where he will be associated as an eye, ear, nose and throat specialist.

Dr. and Mrs. William Egloff of Mason City, left April 18 for Aguirre, Porto Rico, where they will vacation for a short time. Enroute home, they will stop at Boston, where Dr. Egloff will attend the reunion held every five years by the former staff members of the Peter Bent Brigham Hospital.

Dr. H. L. Hendricks of Washington was the guest speaker at the regular weekly dinner meeting of the Y's Men's Club, Tuesday, April 4, speaking on the activities and accomplishments of the county health unit in its fight for the health and sanitation of Washington county.

Dr. and Mrs. S. D. Porter of Grinnell, left April 11, for Philadelphia, where Dr. Porter will take a three months' postgraduate course in surgery and obstetrics at the University of Pennsylvania.

Dr. F. M. Mahin, who for the past four years has been practicing medicine at Ainsworth, has located in Kalona, where he will be associated with Dr. J. L. Fry.

Dr. W. P. Hamsa of the College of Medicine, State University of Iowa, spoke before the leadership training courses in first aid, sponsored by the Boy Scouts and the Red Cross. The meeting was held at the city hall in Iowa City, Tuesday, March 28, and Dr. Hamsa's subject was, "Injuries in which the Skin is not Pierced or Broken."

Dr. Harold A. Lockhart has recently opened an office at 809 Higley Building, Cedar Rapids, where he will conduct a general practice. Dr. Lockhart, who is a recent graduate of the College of Medicine, State University of Iowa, comes to Cedar Rapids from Chicago, where he has just completed a seven months' interneship at the Chicago Lying-in Hospital.

DEATH NOTICES

Bush, Fred Wilson, of Van Horne, aged sixty-three, died April 12, after an illness of several months. He was graduated in 1897 from Barnes Medical College, St. Louis, and had long been a member of the Iowa County Medical Society.

Deschler, Joseph Jordan, of Glidden, aged seventy-six, died March 31 after a long illness. He was graduated in 1880 from the College of Physicians and Surgeons, Baltimore, and had long been a member of the Carroll County Medical Society.

Shellito, Judd Campbell, of Independence, aged forty-four, died April 16 as the result of injuries received in an automobile accident. He was graduated in 1915 from Johns Hopkins University School of Medicine, and at the time of his death was a member of the Buchanan County Medical Society.

Van Werden, William, aged seventy, Des Moines physician, who for the past few years had been living in Los Angeles, died at the Iowa Methodist Hospital, April 18, after having been ill for almost a year. He was graduated in 1885 from Rush Medical College, and at the time of his death was a member of the Polk County Medical Society.

THE BLACK HAWK COUNTY MEDICAL SOCIETY PUBLISHES A BULLETIN

The first issue of an attractive bulletin of the Black Hawk County Medical Society, entitled *The Voice*, has just come to our attention. This attractive twelve-page bulletin, covering in detail, medical news of Black Hawk County, should prove a stimulus to organized medicine in this section. THE JOURNAL welcomes *The Voice* of the Black Hawk County Medical Society into the field of Iowa medical journalism.

University Hospitals
MONTHLY CLINIC
Friday, May 19, 1933

10:00 to 11:00 A. M.
Medicine—Surgical Amphitheater

11:00 to 12:00 A. M.
Genito-Urinary Surgery—Surgical Amphitheater

12:10 P. M.
Luncheon—Doctors' Dining Room

1:00 to 2:00 P. M.
Psychiatry—Psychopathic Hospital

2:00 to 3:00 P. M.
Surgery—Surgical Amphitheater

History of Medicine in Iowa

Edited by the Historical Committee

Dr. William Jepson, Sioux City
Dr. Arthur D. Woods, State Center
Dr. Frank M. Fuller, Keokuk
Dr. Walter L. Bierring, Des Moines
Dr. John T. McClintock, Iowa City

First Des Moines Meeting of the Iowa State Medical Society, February 5-6, 1868

Sixty-five years have passed since the Iowa State Medical Society held its first meeting in Des Moines. It would require a volume to contain a comparison of this first meeting with those held in more recent times, but certain facts connected with this first Des Moines session may be interesting at this time.*

This first session in the capitol city was next in importance to the organizational meeting in Burlington in 1850. Previous to 1868 the meetings were held in the cities of the eastern section of the state for the reason that the only transportation facilities west of the Mississippi River were mainly by means of the stage coach, until the Rock Island road was completed to Des Moines and westward.

Des Moines had become the political center of Iowa, and with other railroads pointing towards it the city was regarded as the probable commercial center of the state. These conditions also promised to make the center of population in and about Des Moines. When in 1867 at the Davenport meeting it was agreed to hold the session for 1868 in Des Moines, it was conceded "that the city could not offer much." The population was about 10,000, and there were no paved streets or well kept sidewalks. The society evidently was favorably impressed with its first reception in Des Moines, as the five succeeding annual sessions were also held in that city.

The meeting convened at Good Templars Hall on Wednesday, February 5, 1868, at 10:00 a. m. Dr. H. L. Whitman, president of the Polk County Medical Society "welcomed the members from abroad in an appropriate and well delivered address."

The minutes of the meeting indicate forenoon and afternoon sessions for two days. Present at this meeting were twenty-one permanent members, and nineteen new members who were received during the session. The officers were: Dr. William Watson, Dubuque, president; Dr. Edward Whinery, Fort Madison, vice president; Dr. A. G. Field, Des Moines, secretary.

The other members present were: Drs. J. C. Blackburn, Fort Madison; W. F. Peck, Davenport; J. Williamson, Ottumwa; J. C. Hughes, Keokuk; H. T. Cleaver, Keokuk; J. C. Shrader, Iowa City; William Corns, Tama City; J. O. Skinner, Des Moines; A. C. Moon, Iowa City; J. W. H. Baker, Davenport; Philip Harvey, Burlington; S. B. Thrall, Ottumwa; A. M. Carpenter, Keokuk; William Voght, Iowa City; S. H. Sawyer, Unionville; William Gutch, Blakesburg; D. V. Cole, Des Moines.

Dr. J. Williamson, Chairman of the Board of Censors, reported favorably on the following applications: Drs. H. L. Whitman, Des Moines; L. M. Tedrick, Winterset; S. Cherry, Winterset; C. H. Rawson, Des Moines; Samuel Whitten, Dowd's Station; W. H. Gibbons, Chariton; J. B. Brenton, Adel; S. J. Caldwell, Adel; D. W. Stewart, Muscatine; William Robertson, Muscatine; D. E. Beadle, Winterset; D. Hutchinson, Winterset; W. H. Ward, Des Moines; Ed. Chapman, Des Moines; J. W. Gustine, Panora; H. Heed, Chariton; S. V. Campbell, Adel; A. Dashiel, Muscatine; J. D. Miles, Muscatine.

Besides the address of President Watson, three formal papers were presented; "Obstetrical Statistics" by Dr. William Gutch, reporting an experience with 537 cases; "Case of United Twins" by Dr. Philip Harvey, Burlington; "Rupture of Uterus with Abdominal Section" by Dr. Edward Whinery, Fort Madison.

It appears to have been the custom at that time to refer debatable questions in the practice of medicine to a committee for investigation and sub-

*The majority of the facts here published were obtained from historical notes left by the late Dr. D. S. Fairchild.

sequent reports. At the first Des Moines meeting the committees which should have reported were: "Criminal Abortion," Dr. J. C. Stone, Chairman; "Lithotomy," Dr. J. C. Hughes, Chairman; "Meteorology and Mid-Topography," Dr. S. D. Richardson, Chairman; "Vaccination," Dr. E. Whinery, Chairman; "Hyperdermic Injection," Dr. A. D. Maxwell, Chairman; "New Remedies," Dr. J. W. H. Baker, Chairman. There is no record to show if these committees reported, or the nature of the reports, if any were made. This record tends to show what was in the minds of the medical practitioners sixty-five years ago. Lithotomy was a major operation reserved for the few bold and dextrous operators in important towns situated on the Mississippi River, and Dr. J. C. Hughes of Keokuk was regarded as the master operator of the state. The question of hyperdermic injections of morphine was also a serious question on account of the many deaths reported. At that time the hyperdermic syringe was used chiefly in administering morphine. The dose of morphine as then given was uncertain, there being no carefully weighed out tablets as today, so the physician guessed at the dose as he measured it out on the point of his knife from the morphine bottle, and no doubt many of the fatal results were from overdoses.

It was at this meeting that articles of incorporation were adopted, the notary who acknowledged these articles being the late F. M. Hubbell of Des Moines. The acknowledgement reads as follows:

"STATE OF IOWA } SS
POLK COUNTY }

Before the undersigned, a Notary Public in and for said county, personally came the above named Edward Whinery, J. W. H. Baker, William Watson, S. B. Thrall, A. G. Field, and H. L. Whitman, who are personally known to me to be the identical persons whose names are subscribed to the foregoing certificate of incorporation as corporators, and acknowledged the execution thereof to be their voluntary act and deed, for the purpose therein stated.

WITNESS by hand and notarial seal this 6th day of February, A. D. 1868.

F. M. HUBBEL.
Notary Public For Polk County."

The following officers were elected for the ensuing year: Dr. Philip Harvey, Burlington, president; Dr. J. W. H. Baker, Davenport, vice president; Dr. A. G. Field, Des Moines, recording secretary; Dr. J. Williamson, Ottumwa, corresponding secretary; Dr. M. B. Cochran, Davenport, treasurer; Dr. H. L. Whitman, Des Moines; Drs. William Gutch, Blakesburg; William Voght, Iowa City; S. B. Thrall, Ottumwa, and G. R. Henry, Burlington, censors.

The following were elected as delegates to attend the next meeting of the American Medical Association to be held in the city of Washington in May, 1868: Dr. J. C. Stone, Burlington; Dr. William Watson, Dubuque; Dr. A. G. Field, Des Moines; Dr. W. F. Peck, Davenport; Dr. N. Steele, Fairfield; Dr. J. C. Shrader, Iowa City; Dr. Wm. Cornes, Iuka; Dr. D. Hutchinson, Winterset; Dr. S. B. Thrall, Ottumwa, and Dr. J. C. Hughes, Keokuk.

The annual meeting of the State Society for 1869 was voted to be held in Des Moines on the second Wednesday in May, "unless that time shall conflict with the time for the meeting of the American Medical Association in 1869, in which event the secretary of this society is authorized to call the meeting for two weeks earlier."

At the afternoon session of the second day it was announced "that the members of the Polk County Medical Society would provide an entertainment for the members of the Iowa State Medical Society, to be given at nine o'clock this evening, and tickets of admission were distributed."

The following resolution was offered by Dr. J. Williamson and adopted: "Resolved that the system of medical college instruction agreed upon in the convention in Cincinnati, May 3rd, 1867, and recommended to the medical colleges throughout the country for their adoption, meets our hearty approval, and we earnestly desire to see the same adopted in every medical college in the United States." The records further state "Dr. Williamson offered the following resolution, which was adopted:

"Resolved, That while our thanks are due to the members of the Polk County Medical Society, for the provision for our entertainment on the occasion of this, our first meeting in the city of Des Moines; yet, as we are to continue to meet annually in this city, and as their tendency is to an unnecessary expenditure of money, and to consume time too valuable to be thus employed, we advise them to refrain from such preparations or entertainments in the future."

Dr. William Watson moved that a vote of thanks be tendered to the Western Stage Company, and also to the various railroad companies of the state that had promoted the interest of this meeting by a reduction of the usual rates of fare; and also to the Polk County Medical Society, for the suitable provisions made for this meeting.

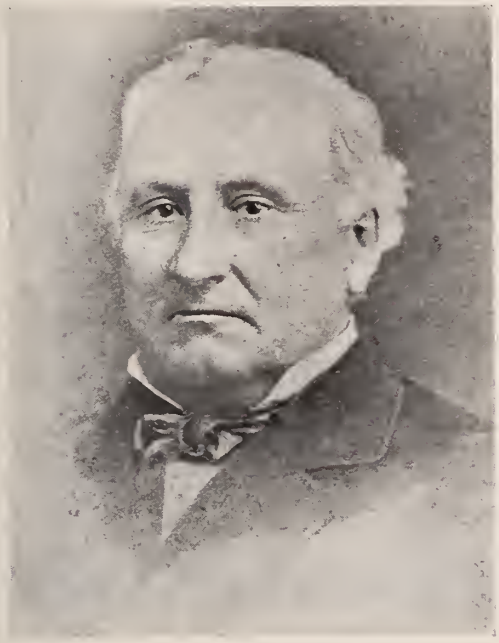
On motion, the society adjourned to meet in the city of Des Moines on the second Wednesday in May, 1869. W. L. BIERRING.

The History of Medicine in Lucas County

Tom Morford Throckmorton, A.M., M.D.,
Chariton
Tom Bentley Throckmorton, B.Sc., M.D.,
Des Moines

(Continued from last month)

Physicians who have practiced in Chariton



Dr. Charles Fitch
1825-1889

The most outstanding man ever to practice in Lucas County, in the writer's opinion, was the late Dr. Charles Fitch. He was born in Orleans County, New York, June 25, 1825, and afterwards moved with his parents to Ohio. At the early age of fifteen years he began to teach school. He received his literary education at the Methodist Seminary at Norwalk and at Oberlin College in Ohio. In 1846, when he was twenty-one years of age, he enlisted in the Fifteenth Regiment of the United States Regulars and served through the entire Mexican War, taking part in the battles of Contreras, Cherubusco, Molino del Rey and Chapultepec. He received an honorable discharge from the army at the close of the war. Charles Fitch then returned to his home and, taking up the study of medicine in Cleveland, was graduated from the Western Reserve Medical College in 1852. During the Civil War, he held the position of contract surgeon, since he declined to muster in the service under the commission which he had received as regimental surgeon. He served three years in this capacity with distinction. At Fort Pillow he was wounded in the thigh and taken prisoner; but was paroled on the following day.

Dr. Fitch came to Chariton in 1852 and may truly be called a pioneer. This was at the time when there was neither a church nor a schoolhouse in the county. Here he was married in 1853 to Miss Lucy Jane Wescoatt, by the Rev. Robert Coles, one of the first ministers to locate in Chariton. Dr. Fitch's residence was continuous in Chariton, except for a few years spent in Keosauqua, Van Buren County. His practice extended into the adjacent counties of Marion, Warren, Monroe, Wayne and Clarke, and even as far south and west as to include Decatur and Union. Dr. Fitch was the right kind of a doctor for this new and wild territory, for nature and education had fitted him well for his tasks. He was robust in constitution, intrepid in character and possessed of a skill in medicine and surgery that was equal to the best of his day. The writer quotes from an address he gave at the old settlers' reunion in Chariton, September 24, 1907: "It is with profound respect that I recall the name of Dr. Charles Fitch. To my mind, no other man who has lived in Lucas County did more for the early settlers than did the good doctor, who came to Chariton in 1852. Over long roads, traveling dark nights through storms, crossing swollen streams not spanned by bridges, following an obscure trail, with only the sky and boundless prairies around him, the doctor journeyed ofttimes cold, hungry, and weary; many times arriving at his destination, on account of the distance traveled, or the loss of the trail, only to find the patient dead, or a child born without medical assistance.

"Dr. Fitch was an outstanding character. His personality was his own. He was a man well developed physically, with an acute, inquiring mind and a keen intellect, not sluggish or lazy. He was endowed with a natural ability to see into the complex workings of the most wonderful handiwork of God, the human body, and to interpret its ills. He was a man, in my opinion, who never had a superior, nor even an equal, in medical science in Lucas or in the adjoining counties. He really was fifty years ahead of his time. I made the acquaintance of the good doctor many years ago and, as a medical brother, I can truthfully say of him that he was always ready to respond to the call of ailing humanity. No matter how far the

distance, how uncertain the condition of the roads or the weather, whether the ailing one be rich or poor, be it night or day, the doctor went when he was summoned. The physicians of the past forty years know nothing of hardships or privations as compared to those which this early pioneer and medical patron had to face and surmount. May peace be to his ashes."

Dr. Fitch, in 1855, became a member of Chariton Lodge No. 63 A. F. and A. M. In 1868 he joined the Independent Order of Odd Fellows, No. 64. He was a good citizen and a man of keen judgment and quick action. In 1854, when smallpox broke out in the eastern part of the county, William Parmenter, Edwin Maydole, and others, became afflicted. Dr. Lind of Lagrange, in Cedar Township, was the first to be called in attendance. Later, Drs. Wyatt Waynick and Fitch were called in consultation. The citizens of Chariton, on learning of the nearness of the disease, raised a furor, called a meeting of the townfolk, and demanded quarantine of the town in the hope of preventing the spread of contagion. Dr. Fitch, who came in late at the meeting, upon learning of its purpose said: "We have no smallpox in Chariton, and we do not need a quarantine. If you insist on quarantining the town you will have to go east three miles to the fork of the road and put up a warning sign saying, 'Smallpox—Take the Left Hand Road.' Gentlemen, you may do this if you wish but if you do, not a merchant will do business outside of the townspeople and those of you who are preparing to sell to the Mormons, who are now on their way west, will have no customers. Quarantine if you like, but remember just what that means." Needless to state the resolution, so hastily passed, was at once rescinded. Fortunately, no other cases of smallpox developed in the county at that time. The writer well remembers the pockmarked faces of William Parmenter and Edwin Maydole, as they were tenants on his father's farm in 1857.

Dr. Fitch, who had no mean ability as a surgeon, amputated William McDermot's leg for gangrene of the foot, June 20, 1875. Mr. McDermot was the first settler to build a cabin and live in the territory of what is now known as Lucas County. Soon after the doctor had located in the county, an epidemic of so-called "dysentery" broke out; and many of those who were stricken died from the disease. Doctors were few and far between, but Dr. Fitch, who had seen much of cholera while at Cleveland, Ohio, and in the upper and lower Sandusky regions, recognized the ailment at once and realized its seriousness. Rather than to stampede the people through fear he kept his own counsel, and in time the epidemic waned and finally ceased. Thus, one may gain insight into the character of the man who always had at heart the interest and welfare of both patient and community.

Dr. Fitch was a pleasant and congenial gentleman and, as a consultant, he always showed a due deference to the writer. I recall vividly an incident which occurred in the early years of my practice while I was located in Derby. In the spring of 1881, my office door was opened one frosty morning and a friendly voice inquired, "Good morning, doctor. May I have the loan of a horse for a few hours?" Looking about I discovered that the visitor was none other than my good friend, Dr. Fitch, of Chariton. "Certainly," I replied. Finding that the doctor's destination was in a locality where I was expecting to make a call, I gave orders for two horses to be saddled and brought at once. The condition of the roads absolutely precluded the use of a buggy or buckboard. Together we started out over very rough and frozen roads. As we turned our mounts onto the old Mormon Trace road, we passed the Jacob Taylor farm. Recognizing the house my guest remarked, "I had a rather peculiar experience there many years ago. I was called out one night to see young Jake. He had been ill for several days with the quinsy. I found him seriously ill. His throat was badly swollen and he was having great difficulty in breathing. I examined him as best I could by candle light and made up my mind that I would not attempt to lance a throat abscess under such trying conditions. After debating the problem in my mind for a time I said to the father, 'Now, Mr. Taylor, what this boy needs, more than anything else, is some sleep. He is all worn out. I will give him some medicine to help him rest and in the morning, if his throat is not better, I will lance it.' I called for a pitcher of boiling water and, after adding some myrrh and chlorate of potash, I directed the patient to inhale the steam. Then I fixed up the 'easing powder' which consisted of a good round dose of ipecac and powdered alum. I finally succeeded in getting the patient to sip a glass of hot water, and then I gave him the powder. Assuring the family that the boy would soon be better, providing he kept his head over the edge of the bed and continued to inhale the steam, I climbed the ladder to the loft, presumably to get a little sleep. Of course I did not take off my clothes; I just waited to see what would happen. In a little while I heard the patient begin to cough and then to retch, the sure signs of the oncoming storm. Soon a voice called out at the bottom of the ladder, 'Doc, oh Doc, come down quick! Jakey is puking like a sick dog.' I called out for them to keep the

patient's head low until I could come down; but I didn't hurry. When I finally got down in the room I found that the retching and coughing had ruptured the abscess. Soon the patient was easy and asleep." This incident illustrates the resourcefulness which the doctor exhibited when confronted by some unusual circumstance.

Dr. Fitch was a hard working man. Endowed by nature with a strong, rugged physique, he had an almost inexhaustible amount of energy. His willingness to serve the people kept him extremely busy and, at times, he would go without sleep or rest for days. This uncanny ability to persevere in his work irritated some of his colleagues who were unable to stand a similar strain. This gave rise to some feeling among a few of his confreres, and on one occasion a certain physician referred to Fitch as having "a cast-iron constitution and a wrought-iron rump", to which the amiable doctor returned the compliment by calling his fraternal brother "a big bag of pomposity." The latter remark was certainly warranted, for I happened to know well the one to whom the appellation was applied.

The doctor's health began to fail in 1887. He spent the winter of 1888 in Los Angeles, California, in the hope of regaining his vitality; but it was not to be. He died at his home in Chariton, in diabetic coma, October 29, 1889, in his sixty-fifth year. The writer attended him during his last sickness and was present when he died. A wife and five children survived him: Mrs. Henry Bertran, Dr. Ella, Charles, Miss Laura and Frank, all of Chariton. His remains were tenderly and affectionately laid to rest in the Chariton cemetery, the last sad act which sympathizing friends and devoted patients could offer as an outward expression to one they loved so well; and thus ended the earthly career of a good man and worthy physician.

Dr. Ella Fitch

Dr. Ella Fitch was a daughter of Dr. Charles and Lucy J. (Wescoatt) Fitch. She was born in Keosauqua, Iowa, in 1863, and received her preliminary education in the public schools at Chariton. She took up the study of medicine with her father and later matriculated in Northwestern University Woman's Medical School, Chicago, Illinois. She was graduated from this institution in the class of 1884 and immediately became associated with her father in the practice of medicine, continuing until the time of his death in 1889. She was the first graduate woman physician in Lucas County. She remained in Chariton until 1893, when she moved to Ottawa, Illinois, where she still resides and practices her chosen profession. She had many of the sterling characteristics of her illustrious father. Her removal from the county was keenly felt by a host of friends and loyal patrons. The writer recalls, with pleasure, many instances in which he met this estimable colleague in consultation and he always found her gracious to the consultant and devoted to her patient. The world would be better, and womankind more sympathetically served if there were more of her nature in the ranks of the medical profession.

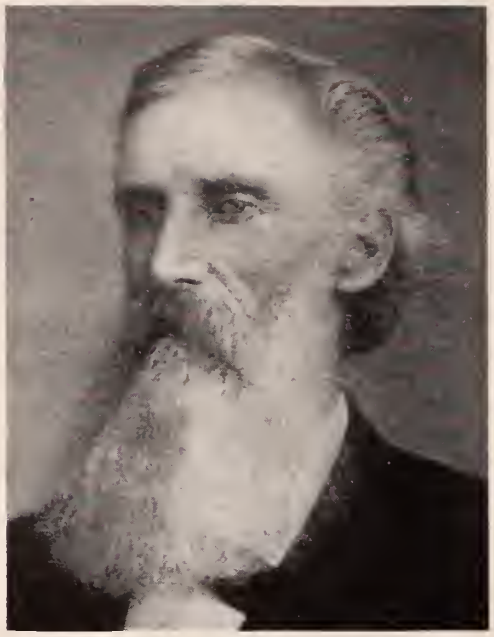


Dr. Ella Fitch
1863-

Dr. David Young Collins

Dr. David Young Collins was born in Morgan County, Ohio, April 11, 1827. He came to Iowa in October, 1844; was graduated from the College of Physicians and Surgeons, Keokuk, in 1853, and located in Chariton in 1854. The doctor soon had a growing practice. The country was new and his patients were far separated. Horseback was his special means of travel, since most of the roads were cow paths, and there were no bridges. He took an active part in the civic affairs of the town and community, and was a charter member of Chariton Lodge No. 63 A. F. and A. M. His interest in masonry and his devotion to its principles were evidenced by his election as Senior Grand Warden of the Grand Lodge of Iowa, in 1877.

He was a successful practitioner and had the confidence of the people. He was kind, courteous, and easily approached. He extracted the first tooth the writer ever had pulled and clipped the



Dr. David Young Collins
1827-1916

frenum of his tongue as his mother thought it would make her boy a more eloquent speaker in later years. Also, he opened a palmar abscess of the right hand for me in 1860. I recall the incident quite well. I was nervous and scared, but I was so impressed with the doctor's manner and mode in allaying my fears that I never forgot them and frequently in later years I resorted to similar methods in my own practice. The doctor married Miss Amanda E. Walker at Fairfield, Iowa. She was the daughter of the Rev. John D. Walker, who came to Iowa, from Ohio, and located in Jefferson County in the early fifties. I was in consultation with the doctor at the bedside of his wife when she died. Dr. Collins was associated with Dr. Charles Fitch for a few years. Following the death of his wife he spent several years in Colorado. He afterwards returned to Chariton, where he died at the home of his son, February 4, 1916, being at that time in his eighty-ninth year. He was buried in the Chariton cemetery.

Dr. George Switzer

Dr. George Switzer came to Iowa and located in Chariton in the early fifties. He was of Holland or Swiss descent. He was a typical country doctor, but we have no knowledge of where or when he received his medical education. He owned property, kept a large garden, and raised an abundance of small fruit. He lived on the main street leading westward out of town, and the flowers and shrubbery were a pleasing sight to the country people passing through the town. The house is still standing and is located two blocks west of the southwest corner of the town square. Clumps of rose bushes, of the original stock, were blooming in the yard in 1932, just as they did in 1861, when the writer, as a boy, was picking berries on the shares for Mrs. Switzer, more than seventy years ago.

At a special election held in May, 1858, the question of a new court house, to be built in the public square, was submitted to the electors of the county. It was adopted by a vote of 598 to 71. The construction of the building was under the administration of Ethan Gard, then a county judge. The records show that Dr. Switzer put in the following bid:

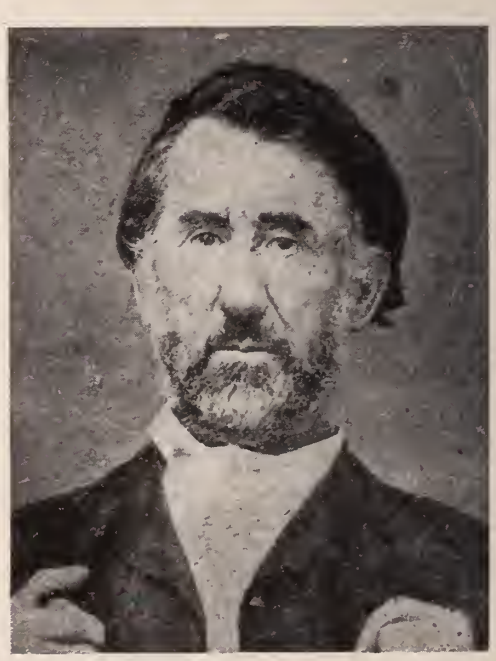
Chariton, Iowa, May 3, 1858.

To the County Judge of Lucas County, Iowa:

I propose building the court house of Lucas County for the sum of thirteen thousand and five hundred dollars.

Signed: GEORGE SWITZER.

The records also show that the bid was not accepted. In its place a verbal one was given by Judge Gard, to the county treasurer, Waitman T. Wade, for thirteen thousand five hundred dollars, which was the amount of Dr. Switzer's bid. It appears that the judge was given the power to build the court house without a contract specifying the price; hence when the building was completed and the items of cost were added up, the amount was over twenty thousand dollars. It was then discovered that Treasurer Wade was nearly nine

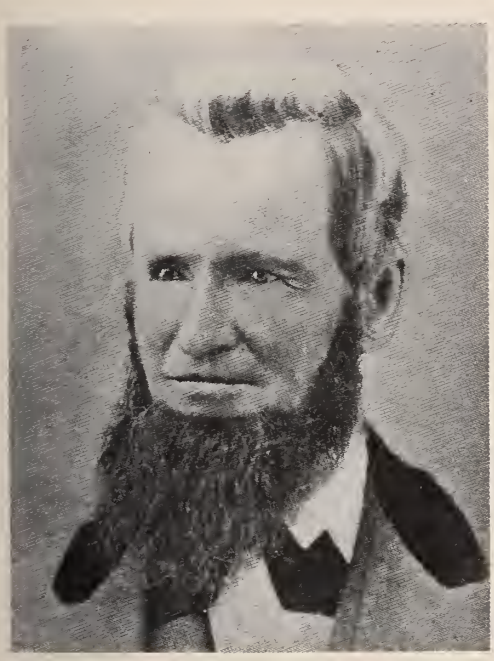


Dr. George Switzer
** -1870*

* Date of birth uncertain.

thousand dollars short in his funds. Of this amount, his bondsmen paid five thousand dollars to the county. I write of this incident to show how easily men made mistakes in conducting business affairs in pioneer days. However, the men who were entrusted to build the court house were honest. I have never heard anything against their character; nor was their integrity ever doubted. I remember the judge for I went to school with his children and was his pupil in the high school when he was the teacher in 1863.

Dr. Switzer died at the home of his daughter, on a farm in Lucas County, in 1870. There is no record as to where his remains are buried.



Dr. Isaac Kneeland
1821-1886

Dr. Isaac Kneeland, the youngest son of Daniel and Grace (Williams) Kneeland, was born in Franklin, New York, August 26, 1821. He studied medicine under Professor Delmeter. After his graduation he commenced the practice of medicine in Berea, Ohio. He remained there until the autumn of 1857, when he came to Iowa and located in Chariton. He was a great reader of medical books and became a successful practitioner. As an expert medical witness before a jury, it is said that he had no equal in this part of the state. He was a good botanist and gave much time to this hobby. He was a member of Chariton Lodge No. 63 A. F. and A. M. He also instituted the Eastern Star Order, Engle Chapter No. 34, in 1866.

In 1859 Dr. Kneeland was elected the first secretary of the new Independent School District of the town, while Dr. W. S. Stonebreaker was elected its first treasurer. He was married to Miss Eliza S. Proctor, a descendant of a noted personage of Mayflower fame. Sometime after the death of his wife he married her sister, Susannah Church Proctor, who died in giving birth to twin daughters, December 18, 1862. The writer, a lad of eleven summers, was present at the funeral with his mother, and well remembers the pale face of the mother in the casket with a dead baby on her arm. The other child, who survived the ordeal, died about eighteen months later. The doctor later was married to Eleanor Crawford, and four children were born to this union.

Dr. Kneeland, after living in Chariton for about twenty years, moved to Burr Oak, Kansas, where he remained until his death which occurred in March, 1886. He was buried with due honors, at his old home in Chariton, by the Masonic fraternity, of which he had long been a prominent member.

The present depression, about which we have heard so much during the past three years, reminds the writer of an incident which occurred during the trying time incident to the Civil War. My father, in conjunction with a neighbor, bought a Ball reaper and mower machine, in June, 1861. They gave their personal notes, backed by several hundred acres of Iowa land, as security for the machine. Needing oil for the new harvester, and also groceries for the family, my father took a wagon-load of oats to Chariton, a distance of some twelve miles from his farm. Every attempt to sell the oats was met with disappointment. There was no market for grain that year and money was exceedingly scarce. He called on Dr. Kneeland, who owned a drug store, in the hope of finding a purchaser. Again his efforts failed. Finally in his desperation he returned to the drug store and said, "Kneeland, I must have some oil for my harvester. Show me where to shovel this load of oats in your barn." The good doctor evidently took pity on my father and exchanged the load of oats for some three or four quarts of fish oil or whale oil, as it was commonly called, but there was no cash forthcoming with which to purchase the much needed groceries. I relate this incident merely to remind calamity howlers of the present age that "hard times" are by no means confined to this generation; and that the long suffering farmer of today is merely experiencing some of the same trials and tribulations encountered by his predecessors, who toiled early and late in agricultural pursuits some seventy years ago. In fact the present-day farmer enjoys blessings, opportunities and luxuries undreamed of by those who first broke the prairie soil of Iowa.

Dr. W. S. Stonebreaker

Dr. W. S. Stonebreaker came from Washington County, Maryland, to Chariton, in the late fifties. In 1859 he was elected the first treasurer of the new Independent School District of the town of Chariton and, as before mentioned, Dr. Isaac Kneeland was elected its first secretary. Dr. Stonebreaker did not devote all of his time to the practice of medicine and surgery, but gave considerable attention to strictly business affairs. He owned much city property and land in Lucas County. There is no record of where he received his medical education, but he was an educated gentleman and had the confidence and respect of the community. He and his wife returned to Maryland about the year 1869, where they afterwards died.

The writer, as a boy during the Civil War, remembers the doctor quite well. He purchased from the Stonebreaker heirs, in April, 1889, a business lot in Chariton, on which he erected a building which he occupied as an office for more than forty years.

Dr. Robert McCormic

Dr. Robert McCormic was born in Carlisle, Pennsylvania, February 5, 1805. He acquired his education in Dickson College, and the Jefferson Medical College of Philadelphia. He began the practice of medicine and surgery in Sharon, Pennsylvania, where he continued for some fifteen years. He was married to Miss Susan Ulp, who died in Sharon in 1847. After the death of his wife the doctor located in the town of Brimfield, near Peoria, Illinois, where he engaged in the practice of medicine for a few years. He then came to Lucas County and was a resident of Chariton, from May 1857, until the time of his death, January 24, 1877. His family consisted of three sons and three daughters, viz., Elizabeth, James O., William L., Albert Ulp, Margaret and Emily. The doctor was in the one hundred day military service of the Civil War time, although he was long past the exemption age. He did not engage in active general practice after coming to Chariton. He was elected county judge in 1865, 1867 and 1869, serving six consecutive years. He was the first county auditor under the law authorizing the establishment of that office. Having resigned from the county judgeship, he was elected county auditor, 1871 to 1873. No man was more familiar with the history of Lucas County than he. He was an upright honorable citizen, and died as he had lived—a consistent and devoted Christian gentleman. His remains were laid to rest in the Chariton cemetery.

(To be continued next month)

OBITUARIES

JUDD CAMPBELL SHELLITO, M.D.
1889-1933

Judd Campbell Shellito was born in the city of Independence, Iowa, May 25, 1889, and grew to manhood in this vicinity. He was fatally injured Sunday morning, April 16, 1933, while enroute home from a medical meeting in Council Bluffs, and died in St. Luke's Hospital, Cedar Rapids, Iowa, at 10:00 a. m. that day.

He was educated in the schools of Independence, the high school of Evanston, from which he entered Princeton University where he was graduated in 1911. He was elected to membership in Phi Beta Kappa, a national scholarship fraternity, at Princeton in 1911. In the fall of 1911 he entered Johns Hopkins University for the study of medicine and was graduated in 1915. He immediately began serving an interneship in Harper Hospital, Detroit, where he specialized in internal medicine and x-ray diagnosis under the well known Preston M. Hickey. He enlisted for military service in April, 1917, in Buffalo, New York.



JUDD CAMPBELL SHELLITO, M.D.

He was married to Margaret Clarke of Independence, May 22, 1917, to which union two children were born; John, fifteen years of age, now a student in St. John's Military Academy, Delafield, Wisconsin, and Ruth, thirteen years of age, at home.

On August 8, 1917, he was commissioned a lieutenant in the Medical Corps, United States Army, and ordered to Cook County Hospital, Chicago, for intensive training in x-ray work. From there he was ordered to Fort Riley, Kansas, where he served until May, 1918, when he was ordered overseas. He was put in charge of the x-ray department of Base Hospital No. 3, an officers hospital at Paris. He was discharged from the service at Camp Grant, Rockford, Illinois, August 5, 1919, since which time he has

been associated with Drs. Amos G. Shellito and Fred F. Agnew in the practice of his profession.

Doctor Shellito was a member of the Buchanan County Medical Society, the Iowa State Medical Society, the American Medical Association, the American College of Physicians, the Iowa Clinical Medical Society, of which he was secretary and treasurer, and the Radiological Society of North America. He was a member of the Rotary Club and secretary-treasurer of the Board of Trustees of the Methodist Episcopal Church, for several years being Councilman-at-large in Independence.

He leaves to mourn his untimely loss, his wife, son and daughter; his father and mother, Doctor and Mrs. A. G. Shellito, and other near relatives.

The passing of this prominent young man, whose ability was so well recognized by the whole state, has shocked and stirred the hearts of the community beyond the ability of any one to express.

The poem, "How Did You Die?", by Edmund Vance Cook, has a message particularly fitting for Dr. Shellito.

Did you tackle that trouble that came your way
With a resolute heart and cheerful?
Or hide your face from the light of day
With a craven soul and fearful?
Oh, a trouble's a ton, or a trouble's an ounce,
Or a trouble is what you make it.
And it isn't the fact that your hurt that counts,
But only how did you take it?

You are beaten to earth? Well, well, what's that?
Come up with a smiling face.
It's nothing against you to fall down flat,
But to lie there—that's disgrace.
The harder your thrown, why the higher you bounce;
Be proud of your blackened eye,
It isn't the fact that your licked that counts;
It's how did you fight and why?

And though you be done to death, what then?
If you battled the best you could;
If you played your part in the world of men,
Why, the Critic will call it good.
Death comes with a crawl, or it comes with a pounce,
And whether he's slow or spry,
It isn't the fact that you're dead that counts,
But only, how did you die?

F. F. Agnew.

MEMORIAL RESOLUTION

Adopted by Buchanan County Medical Society

It has pleased the Divine will to remove Doctor Judd Campbell Shellito from the activities of this life. Yielding in humble submission, we regret the untimely end of a career so brilliantly begun. Forceful in character, keen in observation and faithful to duty, he gave his best to whatever demand life laid upon him. His zeal and energy in study and investigation inspired all with whom he came in contact. He possessed the attributes of the true physician, coupled with the devotion of the scientist.

Truly, death loves a shining mark, and in his passing the members feel keenly the loss of one destined to carry far in the field of medical attainment.

We sympathize deeply with his family in their irreparable loss.

J. H. McGready
H. A. Householder
N. W. Johnson.

AN APPRECIATION

Mingled with the keen regrets that come to each of us when a dear colleague is taken from our midst, is that deeper feeling of gratitude for the privilege of having known a character and example of physician such as that of our departed friend, Judd Campbell Shellito.

Born of fine lineage, an honor student in the halls of famous old Princeton, and a product of the best of American medical training, he came back to his native state with the flavor of an older culture and enthusiasm for service. He is the type of practitioner that is adding a new aspect to Iowa medicine and placing it in the forefront of medical progress.

In the brief measure of years, he seemed but at the threshold of great usefulness, yet in the stimulus of personality, high quality of service and impress left on a new generation of Iowa physicians, he accomplished the achievements of a lifetime.

Walter L. Bierring.

RESOLUTIONS

FRED WILSON BUSH, M.D.
1870-1933

Whereas, our ever kind Father in Heaven has called from our midst a beloved brother physician and friend, Dr. Fred W. Bush, who passed away on April 12 in his home in Van Horne, Iowa,

Therefore, be it resolved that to those of us who knew him best, he was a most capable physician with a sunny, patient nature that enlivened every circle in which he moved,

That Dr. Bush will always be remembered as faithfully devoted to his profession, giving freely of his time and counsel to promote the interests of organized medicine,

That we express our deepest sympathy to Mrs. Bush and to his family, who so patiently administered to his comfort during his last long illness,

And be it further resolved that these resolutions be entered upon the records of this society, and that the secretary be instructed to send a copy to the family and to the Journal of the Iowa State Medical Society for publication.

IOWA COUNTY MEDICAL SOCIETY,
I. J. Sinn
C. F. Watts
Fred Sternagel.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

THE ABILITY TO PAY FOR MEDICAL CARE.—By Louis S. Reed, Ph.D. Publication of the Committee on the Costs of Medical Care: No. 25. The University of Chicago Press, Chicago. Price $2.00.

CLINICAL DIAGNOSIS, Physical and Differential. By Neuton S. Stern, A.B., M.D., Associate Professor of Medicine, University of Tennessee School of Medicine, Memphis. Price, $3.50. The Macmillan Company, New York, 1933.

THE COSTS OF MEDICAL CARE.—A Summary of Investigations on the Economic Aspects of the Prevention and Care of Illness. By I. S. Falk, Ph.D., C. Rufus Rorem, Ph.D., and Martha D. Ring. With a foreword by Ray Lyman Wilbur, M.D., Chairman of the Committee. Publications of the Committee on the Costs of Medical Care: No. 27. The University of Chicago Press, Chicago. Price, $4.00.

DIETETICS FOR THE CHILDREN.—By Milton Arlanden Bridges, B.S., M.D., F.A.C.P., Associate in Medicine at the New York Postgraduate Medical School, Columbia University, in collaboration with Ruth Lothrop Gallup, dietitian, and a foreword by Herman O. Mosenthal, A.B., M.D., Director of Medicine at the New York Postgraduate Medical School, Columbia University. Octavo, 666 pages, price, cloth, $6.50. Lea & Febiger, Philadelphia, 1933.

DISEASES OF THE HEART.—Described for practitioners and students by Sir Thomas Lewis, C.B.E., F.R.S., M.D., D.Sc., LL.D., F.R.C.P., physician in charge of department of clinical research, University College Hospital, London; physician of the staff of the Medical Research Council. Price, $3.50. The Macmillan Company, New York and London, 1933.

DISEASES OF TRADESMEN by Bernardino Ramazzini, with biographical notes translated from the French. Compiled by Herman Goodman, B.S., M.D., New York City, and bound with Silk Handlers' Disease of the Skin, by Herman Goodman, B.S., M.D. Medical Lay Press, New York City, 1933.

HOW TO BUDGET HEALTH.—Guilds for Doctors and Patients. By Evans Clark, director Twentieth Century Fund. Harper & Brothers Publishers. New York and London, 1933. Price, $4.00.

THE INCIDENCE OF ILLNESS AND THE RECEIPT AND COSTS OF MEDICAL CARE AMONG REPRESENTATIVE FAMILIES.—By I. S. Falk, Ph.D., Margaret C. Klem, and Nathan Sinai, D.P.H., Publications of the Committee on the Costs of Medical Care: No. 26. The University of Chicago Press, Chicago. Price, $3.00.

LIGHT THERAPY.—By Frank Hammond Krusen, M.D., Director of the Department of Physical Medicine, Temple University School of Medicine, Philadelphia, with a foreword by John A. Kolmer, M.D., Dr. P. H. Professor of Medicine, Temple University School of Medicine. Thirty-three illustrations. Paul B. Hoeber, Inc., New York, 1933. Price, $3.50.

OPERATIVE SURGERY, VOLUME VII.—By Warren Stone Bickman, M.D., and Phar. M. (Tulane), M.D., (Columbia), F.A.C.S., Former Surgeon in charge of General Surgery, Manhattan State Hospital, New York; and Calvin Mason Smyth, Jr., B.S., M.D., F.A.C.S., Assistant Professor of Surgery, Graduate School of Medicine, University of Pennsylvania. Includes general index to complete work, volumes i to vii, 849 pages with 765 illustrations. W. B. Saunders Company, Philadelphia and London, 1933. Price, cloth, $10.00.

PRACTICAL HEMATOLOGICAL DIAGNOSIS.—By O. H. Perry Pepper, M.D., Professor of Clinical Medicine, University of Pennsylvania, Assistant Chief of the Medical Clinic, Hospital of the University of Pennsylvania, and David L. Farley, M.D., physician to the Pennsylvania Hospital, Philadelphia; and to the Cooper Hospital, Camden, N. J.; Associate in Medicine of the University of Pennsylvania. Illustrated, 562 pages. W. B. Saunders Company, Philadelphia and London, 1933. Price, cloth, $6.00 net.

THE PRACTICAL MEDICINE SERIES. GENERAL THERAPEUTICS, Edited by Bernard Fantus, M.S., M.D., Professor of Therapeutics, University of Illinois College of Medicine, and Louis B. Kartoon, B.S., M.D., Instructor of Medicine, University of Illinois, College of Medicine. Series, 1932. The Year Book Publishers, Chicago.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS. NEUROLOGY. Edited by Peter Bassoe, M.D., Clinical Professor of Neurology, Rush Medical College of the University of Chicago. PSYCHIATRY, Edited by Franklin G. Ebaugh, A.B., M.D., Director, University of Colorado Psychopathic Hospital, Professor of Psychiatry, University of Colorado School of Medicine. Series 1932. The Year Book Publishers, Chicago.

TEN YEARS OF OBSTETRICS AND GYNECOLOGY IN PRIVATE PRACTICE.—By John L. Rothrock, A.B., M.D., F.A.C.S., formerly associate professor of obstetrics and gynecology, University of Minnesota. Octavo of 222 pages with nine illustrations. Paul B. Hoeber, Inc., publishers, 76 Fifth Avenue, New York City, 1933. Price, cloth, $3.00.

BOOK REVIEWS

AMERICAN AND CANADIAN HOSPITALS

A reference book giving historical, statistical and other information on the hospitals and allied institutions of the United States and possessions, and the Dominion of Canada. Edited by James Clark Fifield, with the cooperation of the American Hospital Association. Midwest Publishers Company, Minneapolis. Price $10.00.

This volume contains comprehensive sketches of all approved hospitals and allied institutions in the United States and Canada, including Laborador, Newfoundland, the Northwest Territories and the Yukon Territory. It includes all general and specialized hospitals; hospitals for the treatment of the insane, feebleminded and epileptic, narcotic farms; tuberculosis sanatoriums; hospital ships; leper colonies, and frontier nursing service.

The work has been conducted under the supervision of the American Hospital Association and the data included have been verified through many authenticated sources. The appendix to the volume offers a concise and valuable compendium of the various organizations supporting and promoting hospital work.

Apparently no expense or labor has been spared to make this volume complete and accurate in detail. It should be of great value to hospital administrators, organized medical groups, and to all others interested in the personnel and financial arrangements of the various institutions.

CHININ IN DER ALLGEMEINPRAXIS

Unter Berucksichtigung Pharmakologischer Befunde. Ein Machtrag zu der 1930 Erschienenen Ausgabe, von Dr. Med. Fritz Johannessohn, Mannheim. Bureau tot Bevordering van het Kinine-Gebruik. Amsterdam W. 1932.

This volume is the second and revised edition of a publication which first appeared in 1930, bringing up to date the current literature on the use of quinine as a therapeutic agent. Some four hundred articles have been published on this subject since 1930, and

these data have been incorporated in this enlarged and revised edition.

It is a frank advertisement for increasing the use of quinine, and will be sent free of charge to any physician requesting a copy. However, it differs from the usual propaganda of this nature, in that it presents both favorable and unfavorable comments on the value of quinine in treating the various diseased conditions. The book covers, in a comprehensive manner, the history of quinine, its occurrence and preparation, chemistry, excretion, therapy, toxicity, dosage and incompatibles.

A very complete bibliography concludes the work, which in the opinion of the reviewer, is intensely interesting and definitely worthwhile.

CRITERIA FOR THE CLASSIFICATION AND DIAGNOSIS OF HEART DISEASE

By The Criteria Committee of the Heart Committee of the New York Tuberculosis and Health Association, Inc., Joseph H. Bainton, M.D., Robert L. Levy, M.D., Arthur C. DeGraff, M.D., and Harold E. B. Pardee, M.D., Chairman. Approved by the American Heart Association. Third Edition. New York Tuberculosis and Health Association, New York.

For the past several years the desirability of uniformity in the diagnostic terms for the description or classification of cardiac diseases has been apparent, and two previous editions of the Criteria for the Classification and Diagnosis of Heart Disease were written to meet this need. In this third edition of the book the nomenclature has been extended to include all diagnoses occurring in connection with heart disease, and has made it possible to correlate this system of nomenclature with the "Standard Classified Nomenclature of Disease" recently published by the Commonwealth Fund.

The former editions of this book did pioneer work in spreading the idea of the diagnosis of cardiac diseases according to etiologic, pathologic and functional disturbances, as well as perfecting a functional classification for cardiac patients. These features have been retained in the present edition. Additions appearing in this volume deal with the interpretation of the findings on x-ray examination of the heart and the interpretation of the electrocardiogram.

The book, while appearing under the direction of the Heart Committee of the New York Tuberculosis and Health Association, has been fully approved by the American Heart Association.

DISEASES OF THE EYE

By Hofrat Ernst Fuchs, Former Professor of Ophthalmology in the University of Vienna. Fifteenth German edition of the Lehrbuch der Augenheilkunde, as revised by Maximillian Salzmann, Professor of Ophthalmology, University of Graz, Austria. Authorized translation by E. V. L. Brown, M.D., Professor of Ophthalmology, University of Chicago. Tenth English edition, with 255 illustrations in the text and 41 colored plates. J. B. Lippincott Company, Philadelphia and London, 1933. Price $7.00.

The first German treatise on diseases of the eye by this author was published in 1889, and was followed three years later by the first English translation. The German text has undergone fifteen revisions, which bespeaks the popularity of this text among the Germanic people, and its tenth translation into English bespeaks the great demand for this work in this country.

Agreeable to the traditions of the Vienna school, Professor Fuchs has presented not only an authoritative treatise, but a complete one as well. To provide room for greater thoroughness in the treatment of diseases of the eye the author has omitted certain chapters dealing with methods of examination, refraction and surgical operations on the eye. Beginning with the anatomy and physiology of the eye, he progresses in succeeding chapters to the diseases of the lids, conjunctivis and lachrymal apparatus.

The second part of the text deals with diseases of the tunica fibrosa, while diseases of the uvea, the retina and optic nerve, the lens, zonule and vitreous, the eyeball as a whole, and the orbit, are discussed in successive parts.

The concluding section of the book deals with diseases of the nerves of the eye.

Not only has the volume undergone complete revision, but a series of forty-one colored plates of the fundus, illustrating as many diseased conditions, are included in this edition. These illustrations are done in a four color process, and greatly enhance the value of the book, both as a reference volume and as a text. While intended primarily as a text for teaching purposes, its encyclopedic character (nearly six hundred pages devoted to the diseases of the eye alone) makes it one of the most desirable reference volumes on this subject.

THE FUNDAMENTALS OF GOOD MEDICAL CARE

An outline of the fundamentals of good medical care and an estimate of the service required to supply the medical needs of the United States, by Roger I. Lee, M.D., and Lewis Webster Jones, Ph.D., assisted by Barbara Jones. Publications of the Committee on the Costs of Medical Care, No. 22. The University of Chicago Press, Chicago. Price $2.50.

One of the most difficult subjects attempted in the analysis of the Committee on the Costs of Medical Care has been to estimate the service required to supply the medical needs of the people. This volume sets forth the results of this study.

The committee concludes that the problem of providing adequate medical care is largely one of organ-

ization and cost. It is the opinion of this group that "an increase in the supply of personnel and facilities would of itself serve no useful purpose." The actual provision of adequate medical care must therefore wait upon a practical solution of the problem of economic organization in which the question of cost and the means of payment are paramount. It involves also the solution of difficult problems of technical organization which will assure not only quantitative sufficiency, but above all the quality of service which can be realized only by the maintenance of the traditionally high standards of the medical profession. Over half of the volume is devoted to a statistical appendix covering the major phases of medical service.

This volume attempts to define the term "adequate scientific medical care", and in doing so, is perhaps the most fundamental of all the studies conducted by this committee.

INTERNATIONAL CLINICS

Volume I, Forty-third Series. March, 1933. Edited by Louis Hamman, M.D., Visiting Physician, Johns Hopkins Hospital, Baltimore. Octavo, 305 pages. Sixteen illustrations, one colored plate. J. B. Lippincott Company, Philadelphia, Montreal and London. Price, $3.00.

Volume I of the Forty-third Series of International Clinics appears under a new editorship and with a new list of associate editors. Employing the same form used in the earlier series and with an equally illustrious list of collaborators, this new series of the well known International Clinics will receive a hearty reception by those physicians already familiar with this work.

To those unfamiliar with the international clinics it may be stated that their object is to bring the latest information about current medical thought and practice, to the practitioner in the form of clinics, clinical lectures and reviews. In the present volume the first article discusses the indications for the use of special tests by the practitioner. This article, by Dr. Arthur L. Bloomfield, professor of medicine at Leland Stanford University School of Medicine, lists and critically deals with those technical, diagnostic procedures which during the last decade have come into such prominence. While fully appreciating the significance and diagnostic influence of such procedures as urine examination, blood count, stool examination, the blood Wassermann test, special tests on the urine, clinical bacteriology, x-ray, basal metabolism, and electrocardiography, the author boldly states that medicine may be satisfactorily practiced without these aids except under peculiar and unusual conditions, and that the indiscriminate use of these tests is unwarranted and even ridiculous.

The same broad viewpoint and thorough treatment appears in the fourteen additional articles presented in this number. The International Clinics are indeed, practical, concise and economical postgraduate experiences in medicine.

MAN AS PSYCHOLOGY SEES HIM

By Edward S. Robinson, Professor of Psychology, Yale University. The Macmillan Company, New York, 1932. Price, $2.50.

"Behind every human act, no matter how unimportant it seems on the surface, lie attitudes, habits, beliefs which are fundamental stuff of the personality."

Upon this assumption Professor Robinson attempts to explain even the simplest of man's activities, and to evaluate the motivating forces, intrinsic and extrinsic, which contribute to the formation of personality. He endeavors to unravel those unconscious attitudes which influence us, and discusses the importance of environment and social custom in the development of our habits and beliefs. He states, "Many of our attitudes, preferences, prejudices, hopes and fears come to the individual ready-made in the nature of his social environment." While accepting the influence which sex impulses have upon human behavior, he believes that Freud greatly overstresses this element.

Having psychologically analyzed man and the way the normal mind works, the author attempts an analysis of the science of psychology as it is now accepted and taught in most institutions. He points out its aims, its follies and its accomplishments.

This volume has been written primarily for the lay reader, but physicians, particularly those whose work carries them into other fields, will find the volume highly entertaining and instructive.

ORGANIZED MEDICAL SERVICE AT FORT BENNING, GEORGIA

By I. S. Falk, Ph.D., with Reports on Certain Phases of the Organization by David Riesman, M.D., ScD., and George P. Muller, M.D. The University of Chicago Press, Chicago, Illinois. Price 90 cents.

The Committee on the Costs of Medical Care, in its final report, suggests and recommends a plan of group medicine on a basis of group payment. In furtherance of this idea, the Committee, in an attempt to evaluate the economy and efficiency of such services, investigated several groups which have in the past employed organized facilities for medical care. The present study concerns the operation of such a plan in a military organization and the investigators conclude that the survey "has, in a measure indicated that the medical service, as operated under military auspices, may lend itself as a pattern for a similar organization in civilian communities where a coordinated agency of this kind is otherwise feasible and desirable. . . . Large volumes of good medical care are provided at relatively low cost by efficient utilization of resources."

THE PELVIS IN OBSTETRICS

A Practical Manual of Pelvimetry and Cephalometry, including chapters on Roentgenological Measurement. By Julius Jarcho, M.D., F.A.C.S., Consulting Gynecologist, Hastings Hillside Hospital; Attending Obstetrician and Gynecologist, Sydenham Hospital. 140 illustrations and 51 tables. Paul B. Hoeber, Inc., New York, 1933. Price $6.00.

Due to the improved technic and lessened mortality attending the Cesarean section, there has been a growing tendency among obstetricians to depend on the dangerous test of labor in many cases where physical examination indicates a border line condition. This is an unfortunate practice, and in many instances, particularly where hospital facilities are not immediately available, it may endanger the life of both mother and child.

In full cognizance of these facts, Dr. Jarcho has prepared this very unique and complete volume covering the practice of pelvimetry and cephalometry. While much emphasis is placed upon the measurements which any physician may obtain either in or out of the hospital, special attention has been focused on recent developments in roentgenologic mensuration. In the development of the text the author proceeds from a discussion of the normal female pelvis to the abnormalities which may be encountered, then to the methods of external and internal pelvimetry, and finally to a discussion of the roentgen ray method employed for these measurements.

A comprehensive bibliography of quoted and pertinent references is included. The 140 illustrations used in the text are almost all original, and have not been produced elsewhere.

The volume should be in the hands of every physician, whether he specializes in this subject, or engages in obstetric service only occasionally.

F. W. R.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS. DERMATOLOGY AND SYPHILOLOGY

Edited by Fred Wise, M.D., Professor of Dermatology and Syphilology, New York Postgraduate School of Medicine and Hospital of Columbia University; and Marion B. Sulzberger, M.D., Associate in Dermatology and Syphilology, New York Postgraduate School of Medicine and Hospital of Columbia University. Series 1932. The Year Book Publishers, Chicago.

The publishers of the Practical Medicine Series of Year Books have elected to enlarge the scope of their reviews in the fields of dermatology and urology, respectively, and in the present series have devoted a separate volume to each of these subjects.

This volume, dealing with dermatology and syphilology, covers in a very comprehensive fashion all of the newer literature in this field with particular attention to the investigation of mycotic infections, the problems of allergy, the newer observations in superficial cancer, and the various manifestations of syphilis. Some forty-two pages are devoted to a discussion of the newer therapy in skin diseases, presenting the treatment of fungus skin infections in much detail.

The volume will appeal to the general practitioner as well as the specialist in this field.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS—UROLOGY

Edited by John H. Cunningham, M.D., Associate in Genito-Urinary Surgery, Harvard University Postgraduate School of Medicine. Series 1932. Year Book Publishers, Chicago.

As a departure from the established custom, the publishers of the Practical Medicine Series of Year Books are this year presenting the subject of urology in a separate volume, since they believe that the advances in this branch of practice are of too great importance to be included in a single volume with dermatology. This action is a thoughtful one, since it is apparent that the practice of urology has been divorced from the practice of dermatology and syphilology and is today almost universally practiced as an independent specialty.

This year the volume stresses the systemic manifestations due to pathology originating within the urinary tract and also gives a broader conception of the influence of diseases in other parts of the body, producing abnormal states within the urinary tract. The subject of intravenous pyelography is discussed in much detail. Urinary antisepsis has shown advances during the year and received appropriate attention. The consideration of renal lithiasis, the subject of a congress at Vittel, is most comprehensively dealt with in this year's volume. Much space is devoted to the subjects of prostatic disease and gonorrhea.

The volume is adequately illustrated.

PRINCIPLES AND PRACTICE OF OBSTETRICS

By Joseph B. DeLee, A.M., M.D., Professor of Obstetrics and Gynecology at the University of Chicago; Chief of Obstetrics, Chicago Lying-In Hospital and Dispensary; Consulting Obstetrician to Provident Hospital, to the Chicago Maternity Center, etc. Sixth Edition, Thoroughly revised, 1165 pages with 1221 illustrations in 923 figures, 265 of them in colors. W. B. Saunders Company, Philadelphia and London, 1933. Cloth, $12.00 net.

It is a rare instance indeed, when any medical author is able to maintain a position of preëminence in his particular field for more than a few years. Dr. DeLee has achieved and maintained this outstanding position in the specialty of obstetrics for the past twenty years and this present sixth edition of his universally accepted text is the continuation, in re-

vised form, of a text which he first offered to the medical profession in 1913. Although it has been only five years since his fifth edition was published, sufficient advances have been made in this specialty to require a complete revision of the text.

The new Aschheim-Zondek pregnancy test is fully described and illustrated by a colored plate. The chapters on the obstetric "diurnalia", hyperemesis, eclampsia, abruptio placentae, placenta praevia, ruptura uteri, and postpartum hemorrhage have been completely rewritten and brought abreast with modern practice. Due to the fact that in modern obstetrical practice, the mutilating procedures of an earlier generation have been replaced by surgical procedures, such as the Cesarean section, less stress is laid upon these conditions in this present rewriting. Additional attention has been given to the subject of tuberculosis, diabetes, heart disease, and syphilis as they complicate pregnancy.

Particularly noteworthy in this edition are the many new illustrations which have been used to supplement or replace those found in the earlier editions.

This remarkable new edition of DeLee's Obstetrics is a masterpiece of medical textbook writing and editorship and will be gratefully received by American physicians.

THE SURGICAL CLINICS OF NORTH AMERICA

(Issued serially one number every other month.) Volume xiii, No. 1. (Pacific Coast Surgical Association Number — February, 1933) 247 pages with 90 illustrations. Per Clinic Year (February 1933 to December 1933). W. B. Saunders Company, Philadelphia and London, 1933. Price, paper, $12.00, cloth, $16.00, net.

This number of the Surgical Clinics is a typical clinical volume, with cases presented by twenty-four different authors and more than forty cases and conditions discussed. No one article stands out particularly. Almost the entire field of general and special surgery is touched upon. There is no reviewing of literature. The case reports are concise and to the point with great emphasis placed on technic.

F. W. F.

SURVEYS OF THE MEDICAL FACILITIES IN THREE REPRESENTATIVE SOUTHERN COUNTIES

By C. St. C. Guild, M.D., Dr.P.H. With a Statistical Appendix on the Method of Selecting Representative Counties, By I. S. Falk, Ph.D., University of Chicago Press, Chicago, Illinois. Price $1.00.

This report is the fifth of a series of community surveys conducted by the Committee on the Costs of Medical Care and describes the medical facilities, utilization, and costs in three rural southern counties. The three counties selected were chosen since they appeared to be most typical of some eight hundred counties studied in a preliminary survey and since each presented no special problems peculiar to the particular locality. The study revealed an almost unbelievably low per capita amount of spendable money and the depressing effects of poverty upon medical care.

The survey indicates: (1) an insufficient amount of money is being spent for medical care. (2) much that is spent represents unwise expenditure. (3) individually and unaided, the inhabitants of these districts cannot solve the problem of securing sufficient means to support adequate medical facilities. The report concludes that "Without financial subsidy from sources outside the county or state to supplement local resources, it does not seem even probable that all residents of the 'South' can be assured adequate preventative and therapeutic care".

TWENTIETH ANNUAL REPORT OF THE MEDICAL DEPARTMENT, UNITED FRUIT COMPANY

General Offices: Boston, Massachusetts, 1931. Gratis on request.

The United Fruit Company, through its many interests in Central and South America, must control from the standpoint of health a population estimated at 133,000 people. As good business, they have maintained a very efficient and complete medical department which has conducted valuable researches regarding sanitation and the tropical diseases common to this area.

As a contribution to medical literature, the United Fruit Company each year publish a very complete report of the activities of their medical department, copies of which are distributed to the various medical libraries and to the publishing offices of various medical journals.

The twentieth annual report, covering the fiscal year of 1931, contains many reports of usual and rare diseases, chiefly those occurring in the tropics.

MERCK & COMPANY, INC., SPONSORS RESEARCH

The management of Merck & Company has adopted a policy of intensive research in pure and applied chemistry and allied subjects. To provide adequate facilities for this research work, they are constructing at Rahway, New Jersey, at the present time, a research laboratory to cost in excess of $200,000, which will house a staff of twenty-five research chemists. Dr. Hans Molitor of the University of Vienna will take over the supervision of the details of equipping and staffing the laboratory to be devoted to research in pharmacology.

Dr. Molitor comes to this country with a background of scientific accomplishment in the universities and hospitals of Europe. Born in 1895, in Austria, he took up his studies in the University of Vienna under the faculty of medicine in 1913, receiving his Doctor of Medicine degree in 1921.

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THE PRESIDENT'S ADDRESS—PROGRESS OF MEDICINE*

W. W. BOWEN, M.D., Fort Dodge

The curative arts fall into four classifications, namely, demonology, faith cures, rational medicine and scientific medicine.

The primitive man was unable to understand the phenomena of nature about him; the rising of the sun, moon and stars, and the changes of the seasons he ascribed to some occult or mystic force which he thought of as a spirit or a god. He peopled everything around him, both animate and inanimate, with spirits; every tree, stone, lake, mountain, river, etc. This practice is called animism. Most of these spirits were benevolent or indifferent and he had no fear of them, but he thought that those harmful phenomena of nature, such as storms, blizzards, cyclones, earthquakes and volcanic eruptions, were caused by malevolent spirits or demons or devils, and he lived in constant dread of them.

Sickness and death fell into this category and were the results of some devil or demon getting into a person and working mischief with him. This belief is called demonology, and the untutored savage to this day treats disease by trying to drive out the demon. To accomplish this purpose he makes use of incantations, charms, sacrifices, dancing, beating of tom-toms, sorcery, nasty drugs, and nauseating drinks; all to make the patient's body uninhabitable to the demon and thus drive him out.

Side by side with demonology, the primitive man learned to do many things to alleviate pain and disease. He learned to bathe his sore and bleeding feet, to use poultices of leaves or mud on inflammations and to use sweat baths and massage. He also discovered the medicinal value of many herbs, for instance the poppy or opium which has been in use for a longer period of time than is covered by the history of medicine. This is rational medicine.

It has been the aim of educated physicians for 3,000 years to get away from demonology and practice a rational medicine, but the average man is not so far removed from his ancestors, that if you but scratch off a thin veneer of culture or civilization, you will find the primitive man with all his love for the occult and mystic. It is for this reason that osteopaths, chiropractors, Christian Scientists, magnetic healers, spiritualists, and other cultists, continue to thrive. These are all classed as faith cures because the only benefit derived from them is the belief or faith of the patient that he will be made well by their use.

Modern medicine originated with the Greeks. A thousand years before Christ there lived a king of Thrace, named Aesklepios, or in its Latin form, Aesculapius. He was also a marvelous physician, so marvelous that Pluto, the god of the underworld, complained that Aesklepios was depriving him of his proper number of souls by curing so many people. In after time Aesklepios was deified, and mythmakers said he was the son of Apollo. He had two sons, Machaon and Podalirius, both of whom were physicians but neither of whom was deified. He also had three daughters, Hygeia, Panaceia and Meditrina, all of whom were deified.

The practice of medicine was hereditary in the descendants of Aesklepios for a thousand years and they were called Esclepidae. They founded at least three medical schools, one on the island of Cos, one at Cnidus, just across the bay from Cos, and one at Pergamos, about 150 miles northeast of Cnidus. All were in Asiatic Greece; none was in Greece proper. Besides the medical schools, many temples were erected in which to worship Aesklepios, the most magnificent being at Epidaurus, about 30 miles southwest of Athens.

About 460 B. C., Hippocrates, the greatest of all physicians, was born at Cos. He assembled all known facts in the field of medicine, and this information, together with many observations of his own, remained the last word on all medical subjects for over 2,000 years. Even today there are

* Presented before the Eighty-second Annual Session, Iowa State Medical Society, Des Moines, May 10, 11, 12, 1933.

more references in medical literature to Hippocrates than to any other man.

Aristotle, who probably possessed the greatest mind of any human being, lived a hundred years later. One of his pupils, Alexander the Great, gave him 1,000 men and all the money necessary to collect and describe every plant, animal, bird and insect in Alexander's wide domain. That gigantic work remained the last word on those subjects until a few years ago.

Alexander died at the age of thirty-three, with the known world at his feet. His empire was divided into several parts, but each part was ruled by his generals and their descendants for hundreds of years, and Greek culture was carried to all sections of the world.

Egypt fell to Ptolemy Soter, who founded the Ptolemy dynasty, of which Cleopatra was the last ruling member. The Ptolemies made Alexandria the intellectual center of the world, and built the great Alexandrian Library. Here the savants, philosophers, teachers, students and physicians, gathered together for communion and instruction; here the Jewish bible was translated into Greek; here was collected the lore of Persia, India, Egypt and Greece.

Conquering Rome finally appeared in Egypt in the person of Julius Caesar. He easily captured Alexandria and Egypt. During the attack on Alexandria, a large portion of the great library was accidentally burned. Caesar met the young, bewitching, beguiling, beautiful and luxurious Cleopatra. She was then married to her brother in accord with the Egyptian royal custom. Caesar made her his mistress and by him she had four or five children. After Caesar's death, Mark Antony and the young Augustus divided the world between themselves. To Antony was given Egypt and the eastern countries. Antony also fell under the enticing influence of Cleopatra and he married her. Whatever else Cleopatra may have been, she was highly educated and brilliant. She grieved much over the burning of the great library, and to appease her, Antony brought the library from Pergamos to Egypt and another library was built. The loss of the library was the end of Pergamos as a medical center, and when soon afterward Cos and Cnidus also dwindled out of existence, Alexandria remained the center of learning.

Into this world of Greek culture, but Roman rule, Jesus of Nazareth was born. He, like Alexander, died at the age of thirty-three. His religion spread slowly but surely, and after 300 years there were more followers of this religion than any other. Constantine in 324 A. D. declared it the state religion but it was established only after several reigns. An organized and persistent attack was then made on all pagan practices. Throughout Greece and Syria, there were thousands of beautiful Greek temples, each a work of art and many of them the repositories of the Greek writings. These were systematically destroyed by bands of fanatics led by bishops or deacons. First the idol was torn down and broken to pieces, then the manuscripts were taken from the vaults and burned, and lastly the temple was demolished. In this way most of the Greek literature, including medical literature, was wantonly destroyed.

The clergy, after a time, attained leadership in the matter of education. When any one class in a nation controls education, that class will be highly educated; the others will be ignorant and probably fall into some form of serfdom. That happened in Babylon, Persia, Egypt, Peru and Mexico, and always with the same result. The time soon came that all learning was confined to the monasteries, and for more than a thousand years there was not a single school for laymen in Christian Europe. Education in the monasteries was largely theologic, and science and medicine practically disappeared. The priests and monks practiced medicine and surgery for a long time, but those privileges were taken from them one after another, and the treatment of disease soon consisted of prayers, incantations, charms, amulets and the presence of a tooth or bone or other relic of some saint. Medicine degenerated into demonology. This is really not so surprising, because Jesus himself was a demonologist, as is shown by the fact that over half of the miracles attributed to him were the casting out of devils.

Feudalism came into existence in the middle ages, when each lord was little better than a freebooter, and lived in a military castle surrounded by his retainers and serfs in the most unsanitary conditions. Rich and poor alike were covered with dirt, lice, and itch mites, and the houses were filled with cockroaches, bedbugs, fleas, flies, mosquitoes, rats, and mice, all of which are carriers of disease.

Great plagues spread over the country unhindered by doctors, nurses, sanitation or quarantine. They occurred periodically and carried off people by millions. The Black Death, now called bubonic plague, took a tole of 60,000,000 lives, which was one-third of the population of Europe. Other plagues were typhus, typhoid, leprosy, tuberculosis and syphilis. The legend of the wandering Jew was fully believed. It was said that as Jesus was on his way to Calvary, he fell, and was mocked and laughed at by a Jew standing in a doorway. Jesus arose and pointing his finger at him said, "Thou shalt wander the earth until I come again." From that day until this he wanders, from

Alaska's icy mountains, Siberia's frozen tundras, India's heated forests and Saraha's desert, he wanders, forever wanders, and wherever he goes, cholera follows in his wake, and where he is seen by man, cholera breaks out at that place.

Christianity has been composed of various sects since the beginning. Paul and Peter argued over the Christian tenets and people have argued about them ever since. About 425 A. D., there was a great schism, and all the followers of Nestorius, who led the eastern faction, were excommunicated, but they continued and were known as Nestorian Christians. The members of this group spread over Asia as far as the China Sea. They were of Greek culture, and learning never became pauperized with them as it did with the European Christians. They established medical schools as well as other schools, and treasured all that was left of Greek literature and medical lore.

This combination of Nestorian Christianity and Greek culture, still Roman governed, was soon influenced by the Arabians. Mohammed up to the age of forty, was an inconspicuous merchant. At that time he promulgated a religion of his own. In 622 he was driven out of Mecca, his native town, as an imposter. He then took up the sword, and within ten years Arabia was under his control, both religiously and politically. He died, but his followers, who were the best military men of their age, continued their conquest of the world. Persia soon surrendered, as well as Damascus and Syria. Jerusalem was conquered in 638, and with the exception of a brief period of 88 years the Mohammedans controlled it until the World War. Egypt, with the great Alexandrian Library, came under their rule soon after 638. Omar was then caliph and when he was asked what should be done with the great library, he said, "All truth is in the Koran; if there is more in the library, it is not truth and the library must be destroyed," and thus the library with its great treasures of learning was used for fuel.

The Arabs were ignorant, unlettered nomads, but within two generations they became the most enlightened people of the earth. They quickly absorbed all the learning of the Nestorians and the Greeks, and had all these writings translated into Arabic as well as those of the Persians, the Jews and the Egyptians. Their empire spread rapidly westward from Egypt to the Atlantic, and in 711 they crossed over into Spain, where they remained in power for nearly 800 years. Wherever they went they established schools, universities, and medical schools. In Spain alone they founded thirty universities, and in Cordova, their capital, there were forty hospitals and twenty-seven schools, free to the poor.

It should be remembered that at this time in Christian Europe, there were no schools for laymen, no medical schools of any kind, and medicine had degenerated to demonology. It can easily be appreciated that we owe much to the Arabs: our system of notation, the fundamentals of arithmetic, much of algebra, the beginnings of astronomy and chemistry, and nearly all that we know of Grecian poetry, history, philosophy, science and medicine.

The first medical school in Christian Europe was in Salerno, which is about thirty miles southeast of Naples. The date of its origin has been lost in obscurity, but it was probably in the ninth century. It was a secular school and the early teachers were Jews and Arabians because there were not enough Christians of the requisite education to become teachers. The requirements of the school were high and from it hundreds of physicians were sent to all parts of Europe.

During that remarkable period called the Renaissance, the intellect of Europe awoke from its long lethargy, and the clergy lost control of education. Schools, universities, and medical schools were established throughout Europe. The period lasted about 250 years. The fine arts appeared first; poetry, music, to a small degree, and to a greater degree, painting, sculpture and architecture. It was during this time that the beautiful gothic cathedrals were built. The roots of science go back to antiquity, but from the Renaissance science developed slowly. This was due largely to the opposition of the churches. Real science is comparatively young and scientific medicine is only about seventy-five years old.

Dissection was allowed, but only by papal decree, and it was a very formal affair. First the decree was read and then the dissection was commenced. The professor stood on a raised dais, dressed in a long gown and holding in his hand a long wand. Below him stood one or two assistants, also holding wands. The actual dissection was made by a janitor or some other person of low degree, and the parts dissected were pointed out by the wands. The ceremony lasted about four days, after which all parties retired to some country place and spent several days in festivities and amusements.

The first man to actually perform his own dissections was Vesalius, the young Flemish professor in Padua. He pointed out the errors of Galen's anatomy, but was ridiculed and persecuted by his teacher, the avaricious and jealous Sylvius, and most of his fellow physicians, until in disgust he resigned, burned his notes, and retired to Spain as court physician to Charles V.

Although for some time a library had been main-

tained in connection with the Vatican, after the Renaissance, the popes assiduously gathered every manuscript or piece of literature of the Greeks, Egyptians, and Jews, and preserved them in the Vatican Library. They also collected all examples of Grecian sculpture that could be found and brought them to the Vatican Museum, where they still remain.

It was not always safe to be too scientific. For instance, Michel Servitus discovered the pulmonary circulation in 1550, but was burned at the stake for it, together with all of his writings that could be found, by John Calvin. It is strange but true that the pulmonary circulation should have been discovered before the general circulation.

Harvey (1578-1637) discovered the general circulation in 1613 but did not publish his findings until 1628. His treatise was published in Germany since authorities would not allow it to be published in England, where for a while he was considered demented. He had no microscope and could prove the capillary circulation only theoretically. Malpighi (1628-1694) the father of histology, demonstrated the capillaries and Leeuwenhoeck (1632-1723) saw the actual circulation in frog's feet in 1690.

Often a practical procedure would be started and then be discarded. For instance, the use of the ligature was discontinued because non-absorbable ligatures were used repeatedly, they were always contaminated, and the formation of an abscess or the sloughing of a vessel was inevitable. These conditions caused a secondary hemorrhage which could be controlled only with a hot iron.

Printing came into use about 1450, and illustrations with wood cuts followed shortly. Eustachius, the anatomist, invented copper plates, but the plates he had made to illustrate his own works were not used until 162 years after his death, when they were discovered in the Vatican Library.

Physicians held surgery in contempt, before, during and long after the Renaissance. Crude surgery was done by the barbers, of which there were two classes; those of the long gowns, who shaved the clergy, and those of the short gowns who shaved the commonality. Out of these barbers the barber surgeon developed, then the surgeon, and finally surgery became a part of medicine as it was with the Greeks.

In the history of surgery, a few men stand out in high relief; Ambrose Paré, a barber surgeon, detested by the physicians, beloved by the people, idolized by the soldiers, and honored by the great; John Hunter, also an unlettered man; Lord Lister, who gave us aseptic surgery; and hundreds of surgeons of the nineteenth century when surgery was again an honored profession. In the history of medicine there were many great men, of whom the outstanding ones were: Pasteur, the chemist, who founded bacteriology; Vesalius, the anatomist; and Virchow, paleontologist, anthropologist, ethnologist and statesman. As a pathologist, Virchow had no rival before him, except Morgagni, and after him there has been none.

The eighteenth century was remarkable for the number of schools of thought in medicine. There was the iatromedical, the iatrochemical, the iatromathematical, the pneumonists, the solidists, the Brunonians and a score of others, the names of which are of no importance. The homeopathic school lived longer than any of the others.

We think we have some quacks now, but we know nothing about them as compared with times up to fifty years ago. There were tinkers and peddlers and tooth pullers, oslers, carters, porters, horse gelders, horse leeches, sow gelders, idiots, bawds, witches, conjurers, sooth sayers, rogues, rat catchers, renegades, prostitutes, midwives, quack doctors, and patent medicine peddlers; all practicing medicine and surgery without any hindrance.

Medicine has been on a scientific basis for only about seventy-five years but notwithstanding the great doctors of the past, this could not have been attained without the invention of a few instruments of precision. These are so simple that we think of them as having always existed, while in reality they are almost new. They are:

1. The fever thermometer
2. The ordinary watch
3. The percussion hammar, pleximeter
4. Stethoscope
5. The opththalmoscope
6. The hypodermic syringe
7. The microscope

You are familiar with the story of Galileo (1564-1652), a medical student but never a physician, who when a boy of eighteen, standing in the cathedral at Pisa, watching the long chandeliers swing back and forth, conceived the idea of the pendulum. He made many experiments with pendulums and found that the length of the pendulum controls the time of its oscillation regardless of its weight or the material from which it is made. Few are familiar with the way he timed his pendulums. There were no watches or clocks and no way to measure time as short as a minute and the second was only a theoretic division of time. He timed them with his own pulse beat. He then reversed the process and made pendulums of the proper length to measure the time of the pulse. These instruments he called pulsilogons or pulsi-

logiums. They were so constructed that the pendulum could easily be lengthened or shortened to synchronize with the pulse, and he spoke of a 16 inch pulse or a 20 inch pulse, etc., referring to the length of the pendulum in the pulsilogon.

The fact that Galileo also invented the first thermometer is not so well known. True, it was an imperfect instrument, but both the thermometer and the pulsilogon were put into clinical use by Sanctorius, a professor in Padua. He was ridiculed by the other physicians and when he died the thermometer died with him and remained unused for 200 years. By that time Fahrenheit (1686-1736) had perfected the thermometer and established the Fahrenheit scale. Boerhaave put it into clinical use and was followed by Van Swieten and Haen, his students, but after they died it again fell into disuse, and was not revived until the middle of the nineteenth century by Bright (1789-1858) and the other great physicians in Ireland. The instrument was still crude, about ten inches long, and was carried in a wooden case under the arm. The pocket self-registering fever thermometer was invented by Allbutt, an Englishman in 1869, the year in which I was born. Since then, the magnifying front has been added. A year before that Wunderlich wrote a short treatise called "Fever in Disease." Up to that time physicians had spoken of specific fever, believing that each disease had some peculiar quality of fever associated with it. Wunderlich contended that fever is fever, wherever it is found. He found fever a disease and left it a symptom.

The watch was invented by the Germans. At first it was globular in form, about the size of a Big Ben alarm clock and was hung from a belt at the waist. It gradually assumed its present form and size, a Quaker added the second hand, and our second instrument of precision was complete.

Auenbrugger (1722-1809) was a genial, music-loving German. He began percussing the chest by using mediate percussion. He proved the accuracy of his findings by autopsy and published a description of his method in a little pamphlet of twenty-two pages, which was entirely ignored. Auenbrugger lived to be eighty-seven years old, and one year before he died, his pamphlet was translated into French and published in France. His method gained worldwide prominence and is more useful than any of the systems described by his scornful contemporaries.

Priorry, a Frenchman, invented the pleximeter and introduced immediate percussion, and our third instrument was perfected.

Laënnec (1781-1826), a young Frenchman, invented the stethoscope. He first used simply a sheet of paper rolled up, then an instrument of wood, with a small bell-shaped end to apply to the patient's chest and a flat end to which the physician applied his ear. The Germans still use these monaural stethoscopes, but most Americans prefer the binaural scope, which is a later device.

Helmholtz (1821-1894) invented the ophthalmoscope in 1851, and scientific ophthalmology was born. By the use of this invention a flood of light was thrown on various internal diseases.

Hypodermic medication was begun by Lefargue, a Frenchman, in 1836. He used a trocar and canula, through which he introduced morphine in the form of a paste into the skin along a nerve affected with neuralgia. Pustules always formed at the site of injection and he thought the suppuration curative for neuralgia rather than the morphine. Alexander Wood of Edinburgh in 1843 used morphine in solution, but did not publish anything about it until 1855. He used an Anel syringe, which is a small syringe with a blunt gold or silver point small enough to be introduced into the lachrymal duct. To use this syringe it was necessary first to puncture the skin with a lancet and then to push the blunt point into the subcutaneous tissues, thus making the injection a very painful procedure. Fordyce Barker brought a syringe to America in 1856, but it also required puncture of the skin with a lancet. The bevel-pointed steel needle that we now use is so simple that it would seem to be the first thing thought of, but in reality it was about forty years after Lefargue first used his trocar that this instrument was perfected.

Neither Keene nor Tyson ever saw either a hypodermic or a fever thermometer during our Civil War; but by 1873 the hypodermic was in fairly common use and the bevel-pointed needle had been evolved.

A planoconvex lens of quartz has been found in Nineveh in the ruins of the palace of Nimrod. Nero watched the gladiators fight and saw the Christians torn to pieces by wild beasts, through a kind of monocle. No one knows how long spectacles have been in use, but they were fairly common in the early part of the thirteenth century. The grinding of spectacle lenses led to the grinding of more powerful lenses, and Leeuwenhoeck, a Dutchman, was able to make microscopes strong enough to see blood corpuscles. He made 257 microscopes, which were all lupas or simple microscopes, although some of them had several lenses. Compound microscopes had been made before that time, but they distorted the image and refracted colors, so they were of little use. Joseph Jackson Lister, the father of Lord Lister, invented the acromatic lens in 1830, thus obviating the refrac-

tion of colors. Cavalier devised the compound objective, Huygens the ocular, Abbe the substage illuminator, and the microscope was complete in 1886. Since that time there has been no improvement in the microscope itself and there can be none, because it has reached optical perfection in its present form. It is true that innumerable devices have been added to its external arrangements to make it more convenient and to adapt it to various uses, but it was a perfect instrument in 1886. Both Pasteur and Virchow did most of their work with instruments that were not perfect.

The microscope has led to countless appurtenances and to the creation of several distinct sciences, such as histology, histopathology, and bacteriology. It has done more than any other one thing to make scientific medicine possible. Since medicine has been on a scientific basis, many discoveries have had a great influence, outstanding among which is the x-ray which has revolutionized the diagnosis and treatment of disease.

We are here now in the highest civilization the world has seen. Medicine is firmly fixed on a scientific basis, and is progressing so rapidly that it requires a daily effort to keep pace with it. If a doctor twenty years ago had fallen into a Rip Van Winkle sleep and should now awake and walk into his own office or hospital, he would not know what was taking place, so great has been the change in the science and practice of his own profession. It seems that we are on the edge of a still greater era, because in past generations, advances were made largely by individuals working independently, too often meeting the ridicule of the profession and the opposition of the churches; while now progress is made by the concerted effort of many workers. Every university now is a school for research; there are numerous foundations for various investigations and millions of dollars are spent each year in an effort to discover the cause and cure of diseases.

However, there is danger in the offing and ominous clouds appear on the horizon. I refer to recent attempts to force us into socialism or state medicine. If these efforts are successful and the doctor is put into a menial position with laymen controlling his activities and his pay check, the profession will deteriorate generation after generation. Such a result might seem impossible, but it is not. The people of Ceylon, 2400 years ago, had attained a high degree of civilization and had many hospitals and a highly trained medical profession; today they are semi-barbarians and their medicine is hardly a memory. In India under Asoka, 250 B. C., the medical profession was equal to our own, up to the advent of scientific medicine, and it is doubtful if we can equal them today in plastic surgery, but now their medicine is occultism, magic, etc. The medicine of the Greeks degenerated to demonism in Christian Europe. What has happened repeatedly can happen again. Medicine is in a state of evolution, and it will require the best thought, the best brains, and the best medical statesmanship so to direct this evolution that it does not become a revolution and cause the destruction of our proud profession.

THE PRESIDENT ELECT'S ADDRESS*

CHARLES B. TAYLOR, M.D., Ottumwa

As president, I shall have but little patronage to dispense; I shall have but little authority, not even the power of veto; I am limited chiefly to prophecy, and that is very risky, if one lives too long.

Tonight I will talk on lines in which our state organization is a comparative unit. Since my remarks will not be controversial in any measure, what I say will not be remembered. I shall not go into detail and I shall quote no statistics but I do propose to discuss some fundamentals.

Speaking of another era, Thomas Paine said: "These are times that try men's souls." Shakespeare, through Hamlet, said: "To be, or not to be; that is the question. Whether 'tis nobler in the mind to suffer the slings and arrows of outrageous fortune," or, in the final verdict: "to die, to sleep."

Foresighted and informed members of the medical profession know that an emergency has arisen. They know that a Declaration of Independence or a Boston Tea Party, or both, may be necessary. They know that a General-in-Chief must be selected by an aroused profession, to outfit, train and march it, division after division, against the socialistic uprising which threatens the very *status quo* of medicine.

This sounds like scary language. It sounds as though I might be training an imaginary "Big Bertha" against an imaginary mouse. I wish I might have the "Big Bertha," but I assure you it would not be trained on an imaginary mouse.

When a member of the cabinet, a past president of the American Medical Association, a president of a great university, and a physician of note, joins with scholarly men in advocating radical and fundamental changes in medical practice—then the object of fire is not a mouse. I would say, with Milton, that their arguments are "vain wisdom and false philosophy."

Thousands of physicians, engaged in hundreds of clinics, are losing all identity as individual

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practitioners; they obey the master's voice, a voice unfamiliar with and unattuned to the traditional medical march, written by Hippocrates twenty-five hundred years ago, which has been the marching song for an honorable profession throughout all these generations. What do such men know about medical traditions? Even though they are physicians by name, their only object is the cash income. These clinics are directed by men who are not interested in the physicians composing the clinics, except as they may be exploited; nor in the patients served by the clinics, except as they may pay tribute to Caesar. Who knows better than we that Harvey, Metchnikoff, Ashoff, Koch, and Reed, speak a language totally foreign to those who would exploit medicine? Yet it is a language understood by the most out of the way physician, who goes into the storm at night, to usher in a new life or save an old one, and whose face is radiant over his accomplishment even before he knows what the mission will mean to him financially.

When medicine becomes socialized or mechanized, a new language will be needed, a language of the plant, as it were. I can imagine that it will be something like this: "Install this carrier. Get the pattern maker to work on a new machine that will do the work of three. Fit glasses to this man, that he may focus his eyes perfectly and increase his output by thirty per cent. Facilitate production; develop a high powered sales organization; organize a holding company; sell bonds; add to the plant; increase the capital stock; and lessen the income tax."

This illustration may be somewhat exaggerated, and not adapted to these days of depression. However, I think I can assure you that there will be no place in socialized medicine for such simple language as: "Yes, my dear, he is very sick. He is being starved for air, his fever is high, and his pulse is rapid and weak; but with such a good nurse as you are, and with the interest that he has in you and the children, together with just a little help from me, he will come out of it all right." Is this child's talk? Absolutely not. This is the language of a profound psychologist, combined with the trained sentiment of a man who represents a profession more abundantly endowed with enlightened sentiment than any other class or group in existence. I make no exceptions. We would have that language always stand as the outward expression of an inward state of mind—a mind whose first thought is the well being of his patient.

We Americans, for over three hundred years, have looked upon ourselves as a peculiar people; English, Scotch, Irish, Dutch, German, and Scandinavian and yet different. We are Congregationalists, Presbyterians, Catholics, Episcopalians, Lutherans, Methodists, and Quakers, and yet we are different. The same nationalities, the same religions, and the same political convictions, compounded by the great Apothecary of a new land, into an entirely different combination, with a new potency.

From Leydon, Holland, came this declaration of principles, signed by every member of the congregation under Pastor Robinson: "We verily believe that God is with us, and will prosper us in our endeavors; we are weaned from our mother country, and have learned patience in a hard and strange land. We are industrious and frugal; we are bound together by a sacred band of the Lord, whereof we make great conscience, holding ourselves to each other's good. We do not wish ourselves home again; we have nothing to hope from England or Holland; we are men who will not be easily discouraged." That declaration came from a group of people who had been banished from England to Holland because of their religious beliefs. These men and women, and others coming later, men such as Brewster, Carver, Bradford, Winslow, Standish, Lord Delaware, John Smith, and William Penn, made up the ingredients of this extraordinary compound, with such extraordinary potency.

Naturally, other elements have entered into this compound, which have lessened the potency somewhat, yet we somehow feel that we are still different, and because we are so, that we have a particular function to perform. Perhaps we are egotists and narrowly national, but we still feel that kingly spirit which was so evident in our fathers and mothers who were pioneers in our states. With little money, but an abundance of will power, they had that pride and independence of spirit that could never be questioned. They lacked many of the graces of etiquette, but they had the grace of honesty and the princely bearing of a new type of nobility.

The medical profession of America has come from this new type. "It is to the manner born," and it will not fit into any society that would make it subservient. The profession demands independence of thought; it wants to exercise its powers of initiative, to live in a manner that will harmonize with its intellectual excellency. It does not propose to plead for these inherited rights, but it does propose to hold them.

During my year as your president, I shall do what I can to better organize our society and to make of our members more adequately equipped physicians, so as to combat the elements of disintegration that would make serfs of us all. Peon

physicians may fit into the social structure of some lands; they will never fit into that of America. We can never forget that we have a princely heritage. We want no inter-regnum; we want no restoration. We do want, a continuing dynasty of medical independence and initiative.

TUMORS OF THE BREAST*

AN ATTEMPT TO RATIONALIZE THEIR MANAGEMENT

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In this discussion the term "tumors" refers to all lesions of the breast which produce palpable, definable masses, including benign and malignant neoplasia, and chronic inflammatory lesions, and excluding the diffuse types of chronic mastitis and the relatively rare granulomata.

Dr. Pepys is reported to have said: "Seated in ye club chewing ye rag with ye other worthy gentlemen and ye layman asked for my description of ye symptoms of ye acute appendicitis. I gulped down ye chuckle rising in my throat, noted ye 11 p. m. on ye newly boughten wrist watch, and answered ye curious but well-meaning gentlemen thus: 'My wife requires my entrance through ye front door before ye 3 a. m., which I do verily. Time prevents ye question from being fully answered. But, briefly, ye answer may be given in ye negative manner, thus ye acute appendicitis is seldom mistaken for ye whooping cough.' "

This droll philosophy is not without applicability to the subject under discussion. A full description of the natural history and topographic variations of breast tumors is neither possible nor desirable within the limits of a short paper.

When a patient consults her physician complaining of a tumor in the breast, the physician must determine first whether or not a tumor is actually present, for many patients who either come of their own accord or are referred by their physicians, have no such tumor. This illusion of tumor is explained by the fact that when a normal breast is picked up between the fingers the ducts and mammary tissue compose a definite, firm, more or less irregular mass which vanishes completely when the breast is examined by compressing it lightly against the chest wall with the palm of the hand. If no mass is discovered by this method of examination, one can be sure that no macroscopic tumor is present.

When it has been determined that a patient has a tumor in the breast, a study of the history and a careful examination of the patient, including a thorough but gentle examination of the lesion itself, will often permit a positive diagnosis. A hard, irregular mass, painless and insensitive to pressure, fixed in the breast and to the overlying skin, accompanied by hard, discrete nodules in the axilla, in a patient forty-eight years of age, is almost certainly a cancer. If a girl of eighteen presents a mass the size and shape of an olive, freely movable in the breast and under the skin, a positive diagnosis of a benign lesion is justified. Between these two extremes, however, there are many cases in which it is impossible to determine clinically whether the tumor is benign or malignant. The attempt should be made nevertheless, regardless of the fact that the treatment is excision in any case.

The *etiology* of breast tumors, neoplastic or inflammatory, is vague. Certainly trauma is often responsible, but the resulting tumor may be either neoplastic or inflammatory; the latter is more likely. The age of the patient is important in a negative sense. In a patient under twenty-five years of age the tumor is probably benign, but not necessarily, and it does not follow that the tumor is a cancer simply because the patient is past the age of thirty-five. As a matter of fact, about eighty per cent of patients suffering from chronic mastitis are thirty-five years of age or more.

The history of *pain* must be considered seriously. When a patient states that pain was the symptom which led to an examination revealing a tumor with no attachment to the skin, it is highly probable that the lesion is a mastitis; if the pain persists or increases, and tenderness is constant, that probability is strengthened. In a series of fifty-three cases of chronic mastitis recently reviewed, a preoperative diagnosis of cancer led to radical amputation in two. Both patients included pain among their symptoms, but its importance was minimized by the attending surgeon. The absence of pain, however, does not exclude mastitis. In approximately forty-eight per cent of the case records reviewed it was stated that pain was absent. Furthermore, pain may occur in cancer as a result of involvement of the skin or nipple, but in such cases there can be no serious question about the diagnosis. What has been said about pain is also true of *tenderness*. Pain is seldom present without tenderness, or vice versa.

The *consistency* and *contour* of the mass are important, but frequently not diagnostic. A cancer has a hard, or very firm, consistency. Chronic mastitis, particularly when circumscribed, may be as hard as the hardest cancer, and the irregular contour and fixation in tissues, characteristic of cancer, are often simulated by chronic mastitis. A rubbery or firm mass freely movable in the breast is probably a benign lesion. Fibro-adenomata, cystadenomata and the so-called blue-domed

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cysts of chronic mastitis usually present such characteristics. Cystadenoma is definitely a precancerous lesion. The blue-domed cysts are benign and have been widely reported not only to have no tendency to become cancerous, but to lessen the likelihood of cancer ever occurring. A recent experience makes me skeptical of this claim. After removing a fairly large blue-domed cyst, about which were several smaller ones, microscopic examination revealed an early adenocarcinoma arising in breast tissue in the midst of the cysts. A correct clinical diagnosis of a benign lesion may be possible, but it is dangerous if the patient is in the cancer age.

The *rate of growth* of a tumor is of academic interest but of little value in diagnosis. In many tissues, including those of the breast, rapid growth suggests, but does not prove, the presence of cancer. I have seen scirrhous cancers of the breast which had been present for three years and were no larger than an olive. One of the most rapidly enlarging tumors noted in recent years was a benign adenoma of the breast. It is evident that chronic mastitis, being essentially an inflammatory condition, may enlarge progressively.

Discharge from the nipple occurs in both benign and malignant conditions, but is relatively more common with the former.

The above review of the more common characteristics of breast tumors is presented in this manner not to prove the hopelessness of making a correct diagnosis of breast tumors, but to emphasize the danger of depending entirely upon the clinical diagnosis as a guide to the treatment.

If a tumor mass is present, the surgeon is confronted with the immediate necessity of outlining a sane management to the patient. Unfortunately, there are wide variations in opinion as to what plan should be followed. It is my wish to present an attitude toward breast tumors, and a method of management which I believe will give the patient the greatest possible benefit. The plan may be varied to suit individual cases without deviating from its fundamental principles. If these principles are not observed in our advice to patients with breast tumors, as with other conditions, our patients often become skeptical. When four physicians agree, the patient believes all of them. When two physicians advise one plan, and two an opposing one, the patient may not accept either plan. More important, however, is the fact that departure from such principles will account for some failures to eradicate precancerous lesions, for the occasional performance of inadequate operations upon malignant tumors, and for too radical removal of tissues in benign lesions.

There can be no guesswork in the treatment of breast tumors if, with the general advance of surgery, the results of such treatment are to improve correspondingly. The only means of lessening the mortality rate of breast cancer is early diagnosis and prompt, adequate treatment. The high mortality rate can be accounted for partially by the failure of those affected to report promptly to their physician the finding of a mass in the breast. Situated in superficial tissues over the bony thorax, breast cancers should be recognized much earlier than most other common malignancies; yet even with early recognition, and every other factor being favorable, the tendency to early metastasis will continue to rob many of a cure.

Our responsibility does not exclude education, but, as practicing physicians, it demands first a serious consideration of individual cases, and second a plan of action that is thorough and logical. Until physicians become of one mind on this point, they are not justified in criticizing patients for delays. It is natural, and always will be, for some to fear more the knowledge of the nature of their affliction and the possible physical pain necessary to eradicate it than the consequence of silence. It is our duty to educate; it is our privilege to inspire confidence.

The *treatment* of breast tumors consists of prompt, complete removal in all cases in which there is no contra-indication to such an operative procedure. For the consideration of treatment, tumors of the breast may be divided into three clinical groups:

1. Tumors unquestionably malignant
2. Tumors unquestionably benign
3. Tumors which may be either malignant or benign

Of the single, recognized methods of treatment of breast carcinoma, radical removal offers the greatest possibility of a cure. We say "the greatest possibility of a cure" advisedly, because many patients have been reported as cured by x-ray treatment alone. However, considering cancer in all degrees of tissue involvement and grades of malignancy, excision combined with x-ray therapy provides the optimum chance for a cure. One is not justified in testing the effect of irradiation on an operable breast carcinoma with the expectation of later removing the lesion if this treatment fails, for during this period of trial therapy, metastases may occur.

We do not wish to minimize the importance of x-ray therapy. We know that many breast cancers show remarkable improvement under such treatment. This is truer today than it was ten years ago, and with continued improvement in tubes, filtering, and technic, even more successful results may be accomplished in the future. Some recent

cases, considered inoperable because of extensive skin involvement especially, have shown remarkable retrogression of the cancer and a few have been made operable. Certainly x-ray treatment should be advised following radical amputation, and in cases which are inoperable because of local extension or metastases.

A radical operation, including removal of the pectoral muscles, and a thorough extirpation of the axillary lymph nodes, is the only procedure ever justified when cancer is diagnosed, and the aim of the treatment is a cure. The fact that the lesion is small and young is no indication that metastasis to lymph nodes has not occurred. A simple excision or mastectomy will often rob such a patient of a cure that would have been relatively certain with radical removal.

Contra-indications to radical surgery in breast cancer are: metastases beyond operability, extensive skin involvement, and a rapidly invading malignancy in a young person. Until recently, metastasis to supraclavicular lymph nodes, even in the absence of demonstrable visceral or bone involvement, was considered as evidence of inoperability. Now patients presenting such findings are treated by radical excision in the usual manner. The justification of this plan is based on the belief that the removal of the primary tumor, involved axillary lymph nodes, and the thick, muscular anterior wall of the axilla, provides a more favorable opportunity to eradicate by irradiation therapy the minimal amount of cancer tissue remaining.

Extensive involvement of the overlying skin by cancer contra-indicates any attempt at primary operative removal. Recurrence is almost invariably prompt and extensive. Unless the cutaneous involvement can first be lessened by x-ray therapy, surgical treatment is not advised. The results of operative treatment in patients less than thirty years of age are invariably bad, regardless of whether or not the skin has been invaded. In such cases we believe that irradiation offers as much, if not more, than surgery.

The treatment of choice for benign tumors is removal. Usually they are small and excision offers no difficulties. A histologic examination is an essential part of the management. It corroborates the diagnosis, furnishes the maximum of assurance to the patient, and completes an otherwise valueless surgical record. Advice against the removal of an unquestionably benign tumor is unwise. Such an attitude presumes that benign tumors never become malignant, and there can be no argument in favor of such advice.

The final group for consideration is that in which a positive clinical diagnosis cannot be made. The advisability of removing these tumors is not questioned; only definitive treatment is to be determined. If histologic examination proves the tumor to be benign, it should be removed either by local excision or a simple mastectomy, depending upon its size and other characteristics. If it proves to be malignant, we must resort to radical resection.

The possibility of a local excision, *per se,* being responsible for metastasis, is not a serious one. If followed immediately by a radical amputation, a partial local excision is probably not dangerous. However, it is neither justifiable nor necessary to remove a *possible cancer,* either by local excision or breast amputation, and wait several days for a histologic report. This delay can be avoided by examining a frozen section before concluding the operation.

It cannot be denied that when a radical breast amputation is to be done, the results of which depend so much upon thorough and careful technic, the facilities of a hospital should always be utilized. It is even more important that the removal of a *questionable* lesion, which may possibly be a cancer, and if so, usually an *early one,* be undertaken under circumstances which afford the greatest chance for a diagnosis and a cure.

The plan of management best suited to the case should be explained to the patient. It is accepted because it obviates a period of objectionable suspense, only one operation is required, and it prevents an unnecessary sacrifice of tissue without jeopardizing the result. The plan is accepted because it is fundamentally sound.

This brief discussion of the management of breast tumors is not original. It is a review of some of the known facts regarding these lesions, and an attempt to formulate a plan for logical application of these facts. If this has been accomplished, I trust that a more uniform management will result.

CACHEXIA IN RELATION TO CANCER OF THE RECTUM

CHARLES J. DRUECK, M.D., Chicago

The word "cachexia" comes from a Greek word meaning "bad condition" and is a loosely defined term used to include almost any depraved condition of the body in which the ravages of chronic wasting disease become a leading complication. It is an especially important symptom of carcinoma, tuberculosis, syphilis and malaria, particularly when these diseases involve the digestive tract. In a lesser form it complicates all infections and intoxications. Many diseases, clinically different, have been included under the broad term cachectic by prefixing this word as a qualifying adjective, as for example; cachexia parasitica, when refer-

ring to the more serious intestinal parasitic infections, (Ankylostomum duodenale, Bothriocephalus latus, Bilharzia hematobia, and Trichina spiralis). Cachexia is also associated with many other conditions, including the leukemias and uterine disease.

Cachexia is characterized clinically by extreme emaciation, physical weakness, profound anemia, and lowered resistance to secondary infections. It is accompanied by a diffuse, faint, muddy pigmentation of the skin. In the case of cancer (particularly of the rectum) cachexia is always evident when there is necrosis of the neoplasm due either to ulceration and secondary infection, or to interference with the blood supply of the tumor causing secondary sepsis or hemorrhage.

In the non-malignant infections and intoxications accompanied by fever, the whole metabolism is so altered that the catabolic or destructive processes are in excess, and it is thought that in time the tissues themselves are attacked and oxidized. It is therefore not surprising that extreme degrees of emaciation are found in cases of protracted infections with fever.

The same changes accompany the ravages of certain tumors, even when there is no bacterial infection, no ulceration, and no fever. Not all tumors produce these changes, nor are the emaciation and evidence of poisoning dependent altogether upon the size of the new growth, because cachexia may be the first indication of the existence of the tumor. In searching for a cause of this physical depravity one might imagine that much food and body substance had been consumed or diverted to the formation of a large new growth, but it is necessary to believe, when the tumor is small, that the neoplasm disturbs metabolism through some poison which it distills or whose formation it favors.

We are all acquainted with the theory that cancer never occurs in healthy tissue. Therefore, all of these cancers, and particularly cancers of the rectum, are preceded by definite disturbances of function and definite inflammatory conditions, such as colitis, hemorrhoids, ulcers or fissures. All of these disturbances are associated with digestive disorders in the upper intestinal region. This dysfunction very shortly evidences itself by a type of toxemia. These patients come to us with a history of lack of "pep" and inability to consume a well balanced meal, or they come with a marked dislike for certain foods previously eaten and relished. In many cases local symptoms of disease are not manifest for a considerable time, a fact which lends importance to the early recognition of derangements of normal health.

Anorexia in our cancerous patient must be met by diet and hygiene rather than by drugs, and because of the many complicating conditions, this subject must be approached cautiously. This is especially true during periods of secondary acute infection, accompanied by fever, because at such times the appetite is further diminished. The appetite is dependent upon the state of the gustatory nerves, the condition of the digestive tract and the requirements of the organism as a whole. The appetite, thirst, frequency of defecation, and consistency and other characteristics of the stool, have wide limits of variance even in health. They are to a considerable extent influenced by the individual's habits and his mode of life. Beyond these limits they, together with certain associated symptoms, acquire clinical significance of importance when diseases of the digestive tract are present.

The quantities of food ingested depend on the age, sex, stature and the usual amount consumed when the patient was in a healthy condition. A stereotyped diet is not advisable and a more satisfactory result is obtained by studying our patient's whims of appetite; then by addition and substitution, varying the ration gradually so as to meet the indicated needs. Modification of the diet may be more beneficial in one case than in another.

The qualitative regulation of the diet, or the selection of the appropriate food stuffs, depends on the character of the case and the complicating morbid conditions. If diabetes, gout, nephritis, arterial hypertension, intestinal obstruction, or chronic toxemic conditions exist, the supportive diet must be made to suit those conditions; but if there are no special indications from complicating diseased conditions, the diet should be as near the normal health diet as is consistent with the necessary caloric value, including, however, certain special features. One of these features is the supplying of a liberal and even excessive ration of protein in order to safeguard that vital food element from being consumed in the search for stored body fuel to meet the deficit caused by the disease. Another of these features is the provision of a liberal quantity of vitamins. This may require special qualitative arrangement of the diet because of the restricted quantities of the food stuffs. Another feature is the careful regulation of the proper amount of roughage to insure against constipation which is predisposed to by the changed quantity of food eaten. All diets should be made as palatable and satisfying as conditions permit. Some foods such as animal flesh, eggs, sweets and foods which are bulky, have a special satiety value. It is generally desirable to include some animal flesh and eggs in the diet for satiety as well as for

other reasons when they are not contra-indicated by complicating conditions. When they are contra-indicated, satiety may be sought by the use of sweets, cheese and milk, in accordance with the principle of the "easy diet."

We should balance the diet with particular care, always bearing in mind the difficulties imposed by the limitations in regard to quantities. It is most important that we safeguard against vitamin deficiency. Most of the vitamins can be secured by a liberal allowance of green vegetables and fruits; but it is well to include regularly in the diet a small amount of food stuffs which contain large quantities of fat-soluble vitamins A and D, such as butter and eggs.

In balancing the minerals in the diet we must take into account the tendency to acidosis. A diet which is strongly alkaline, such as a strict lacto-vegetarian diet, would meet this indication; but the acidific influence of a moderate amount of animal flesh or eggs can ordinarily be disregarded if the diet is otherwise well balanced, and especially if it includes an abundance of vegetables and fruits.

The water ration should be liberal without being excessive. A liberal intake of water favors increased elimination of waste material and improved combustion. If there is notable heart weakness, some restriction of fluid may be necessary.

In the terminal stages of cancer the patient is not only unable to take food except in minimum quantities, but life is also often maintained without it for a considerable period. This fact is due to the extreme limitation of vital activities.

The nutrition of the patient is of the utmost importance and whenever possible, frequent feedings of high caloric value are indicated. The anorexia so common in advanced malignancies, can frequently be overcome by small forced feedings of tastily prepared food concentrates, given at two- or three-hour intervals. Often, by this means, it is possible to keep a patient from losing weight for several months, and occasionally slight increase in weight occurs.

Every effort should be made to stimulate the hematopoietic organs. Foods rich in iron, such as green vegetables, liver, brain, kidney and sweetbreads, should be made a part of the daily diet, and prepared in various ways so that the patient will not tire of them too quickly.

Whenever possible extra vitamins A and D should be administered. Cod-liver oil frequently cannot be tolerated, but some substitute such as haliver oil with viosterol, in capsule form should be given three times daily. One capsule of this solution is said to be equivalent to three teaspoonfuls of cod-liver oil and ten drops of viosterol (250 D).

At attitude of cheerfulness and hopefulness on the part of those concerned with the patient is most important. Undoubtedly the condition of the mind has a powerful effect on the body. It is an interesting and curious fact that those suffering from cancer are not usually as depressed as those suffering from some other chronic diseases. Much of the gloom which surrounds some patients emanates from attendants, and this condition should not exist. The physician should arrange for tranquility and beauty to be found in the patient's environment and should see that anything which unduly irritates him is avoided. There are many ways by which mental solace and physical comfort can be brought about if we will but apply ourselves to the task and not shirk our responsibility. Very often when a patient discovers he has an incurable disease he is allowed to droop and become melancholic. While I do not want to extend unwarranted and unfounded hopes, I feel that we should always bear in mind that even when it is believed that "nothing more can be done," much can often be accomplished. The patient should not be abandoned with a gesture of hopelessness, but his every complaint and complication must be met with the following thought in mind: some day, some one, and it may be you while attending this case, will discover something radical in the way of a cure for cancer. The picture of carcinoma today is very much like the picture of juvenile diabetes a few years ago. At that time when a diabetic child was brought to us our prognosis was that the child would not live more than two years; then insulin came into use and the whole picture changed.

Careful direction should be given regarding our patient's daily program of both physical and mental exercise. He should be encouraged to continue his usual activities as much as his strength will permit.

Plenty of fresh air and sunshine should be obtained, without fatigue, by means of outdoor exercises, automobile rides, and sun baths on the porch or in the room with the windows open. All of these divert the patient's mind from his infirmity and frequently will help a bedridden subject to become ambulatory. I have had patients with bed sores buoyed up to doing light work and as a consequence the sores promptly healed and disappeared.

Open-air sunlight is invigorating and helpful, at least to the morale. A moderate tan decreases the otherwise inevitable pallor and may in some manner enhance resistance to disease. It at

least makes the patient look well which is in itself a consideration of some importance.

Mingling with friends and the family has a most stimulating effect. If obstruction has occurred and a colostomy has been performed, some patients think there is an offensive odor about them. If everything is properly cared for there need be no unpleasant odor in patients with cancer of the rectum, and our patient should be encouraged to mingle socially, and at the table, with his family and neighbors.

GASTRIC CARCINOMA

Harry A. Collins, M.D., Des Moines

Gastric carcinoma may be one of the most hopeless or one of the most curable types of cancer. These facts, together with the difficulties of early diagnosis, the difference of opinion as to the best method of management, the uncertainty of the exact relationship of gastric ulcer to gastric cancer, and the marked frequency of malignant lesions of the stomach, provide questions which are very important for consideration.

Carcinoma is one of the most frequent lesions of the stomach, and this viscus is one of the most common sites for carcinoma. Adami found that 50.2 per cent of all cases of carcinoma were situated in the stomach; Virchow 35 per cent, Osler 21 per cent, and Paterson 60.8 per cent. Johnson and Lawrence have shown that the three most common sites of carcinoma are the uterus, the breast, and the stomach. In England there are 4,000 to 5,000 deaths from cancer of the stomach each year and in the United States several thousand deaths occur each year.

Cancer of the stomach is most common between the ages of forty and sixty years; the history may be of short duration or many months. Mayo, Robson and Moynihan quote Widerhofen as recording a congenital case of carcinoma of the stomach, and Cullingworth as having a case in a child five weeks of age, but the youngest in their series was twenty years of age. Ness and Teacher report an authentic case in a boy fourteen years of age. Sherren reports a patient twenty-one years of age, and Canney reports one nineteen years of age. The youngest patient in Walton's series was twenty-seven years old. The first case that I ever fluoroscoped was that of a nurse, twenty years of age, with an inoperable cancer of the stomach.

The possibility of carcinomatous changes arising in the site of a chronic gastric ulcer was discussed first by Cruveilhiar and a year later by Rokitansky. The statistics of Osler and McCrae show a relatively small proportion, four out of 150 cases, with a previous history of such an ulcer. Wilson and MacCarty place the figure as high as 71 per cent, while Mayo, in a series of 216 cases reported by MacCarty, found that as many as 79 per cent showed this evidence of ulcer.

Bartlett of London believed that 30 to 40 per cent, rather than 79 per cent, of gastric ulcers become malignant. In 47 per cent of proved cases of carcinoma of the stomach, reported by Eusterman, there was a characteristic ulcer history. These figures prove beyond doubt that chronic gastric ulcers undergo malignant changes. For this reason we should use extreme care in the handling of such cases and should not defer proper surgical measures until it is too late for satisfactory treatment.

SYMPTOMS

The symptoms of cancer of the stomach may vary from those of an apparently insignificant dyspepsia to those of severe asthenia, pain and vomiting as the result of a high-grade obstruction. Walton says there is too great a tendency to regard a cancer of the stomach in its early stages as a case of gastritis and to continue with medical treatment until there is but little chance of successful operative removal. It seems advisable then for us to make no other gastric diagnosis until cancer of the stomach is satisfactorily eliminated, when dealing with patients past forty years of age. The classic clinical picture of carcinoma of the stomach with the characteristic findings on gastric analysis and physical examination, represents an advanced stage of the disease. The symptoms may vary greatly as to the site of the lesion and the amount of motor impairment. It is evident that a lesion of the pylorus will present a syndrome much different from one of the cardia, and a lesion in the body of the stomach may be well advanced before symptoms are manifest. When the lesion is small and definitely circumscribed, the symptoms may be rather characteristic of ulcer, and may respond temporarily to ulcer management.

The progress made in the early diagnosis of cancer of the stomach in the past decade can be attributed to the use of the Roentgen ray. Although it is generally recognized that successful treatment of cancer of the stomach depends on early diagnosis, very little, if any, progress has been made in the early recognition of cancer of the stomach by the interpretation of the clinical symptoms alone. Cancer of the stomach is frequently so situated that early recognition is impossible by clinical means because of the absence of significant signs or symptoms until the disease is far advanced. Even pyloric lesions may not give rise to obstructive symptoms until the perigastric tissue is involved. Gastric acidity is a

time-honored but most unreliable sign of cancer of the stomach. Many observers have shown that free hydrochloric acid can be demonstrated in the gastric contents of patients with gastric cancer. In a series of 1,000 cases of cancer of the stomach, Balfour reported the presence of free hydrochloric acid in 47.8 per cent.

Therefore, in view of the fact that early diagnosis by clinical means is frequently impossible because of the unreliable clinical signs and symptoms, progress toward increasing the percentage of early diagnosis *must* come through a more general recognition of the fact that the Roentgen ray is the most reliable means of determining the presence of a cancer of the stomach. The Roentgen ray will demonstrate from 96 to 98 per cent of the gastric lesions, three out of four of which are malignant. If we neglect to take advantage of such an accurate method of diagnosis, we are guilty of a serious error. The fact that only 25 per cent of cancers of the stomach are resectible at the time a diagnosis is made, is due largely to the failure of the examining doctor to make an early diagnosis. We should all realize that an early cancer of the stomach does not present definite signs and symptoms, and should not allow ourselves to be lulled into a state of indifference as to the patient's condition simply because he apparently enjoys good health, because the gastric acids are normal, or because there is no loss in weight and no palpable tumor. In all instances of unexplained dyspepsias, we should demand repeated fluoroscopic examinations of the stomach by a competent man.

About one-fourth of the resectible carcinomas of the stomach, ulcerating and otherwise, temporarily simulate peptic ulcers, especially in the beginning, and 50 per cent of all resectible carcinomatous ulcers give rise to peptic ulcer symptoms over a long period of time. The pain of a carcinomatous ulcer lacks intermittency; it is more or less continuous. The clinical course is also more or less continuous, the pain is aggravated by alimentation, there is a loss of appetite, and nausea may be a symptom, even in the presence of adequate gastric acidity. It is quite possible for a verified gastric ulcer (benign) to have its onset in advanced age. However, the combination of advanced age and symptoms of recent appearance should at all times arouse the suspicion of malignancy even though the lesion is small. If the symptoms are atypical with a tendency to retention, the lesion should be considered malignant until proved otherwise.

The location of the lesion is of some importance in differential diagnosis. Lesions near the pylorus, on the posterior wall and on the greater curvature of the stomach, have a tendency to be carcinomatous. In more than 80 per cent of carcinomatous ulcers and small ulcerating carcinomas, free hydrochloric acid is present. It would not be amiss to mention here that five per cent of all cases of benign chronic ulcers have an achlorhydria as shown by a standard test meal and fractional analysis.

PREPARATION FOR OPERATION

Much can be done to minimize the operative risk of a patient with cancer of the stomach. In the presence of an obstructive lesion of the stomach, it is always advisable to hospitalize the patient for several days before operation. During this time, it is well to give a more liberal diet, to force fluids, and to institute frequent gastric lavage. The fluids are most beneficial when given intravenously, 1 per cent salt and 10 per cent glucose. The elasticity of the distended stomach is greatly benefited and the edematous friable mucous membrane is transformed into a much more healthy condition, which enables the surgeon to carry out a safer and more satisfactory surgical procedure. Many clinicians and observers resort to transfusions as a preoperative measure when the hemoglobin drops below 40 per cent. This procedure, I believe, is of no particular benefit unless the patient has had a recent massive hemorrhage, because even after transfusion the hemoglobin is not greatly elevated.

CURABILITY OF CANCER

Surgery has made definite advances in the successful treatment of cancer of the stomach. Balfour reported a series of 128 cases of cancer of the stomach in which partial resection was done. These patients were operated upon between the years of 1910 and 1920, and all of those reported were alive and well ten years later. According to Balfour, about one-half of the cases of cancer of the stomach seen at the Mayo Clinic were explored, but in only 50 per cent of those was the cancer resectible. In his study, he found that 19 per cent of the cases of cancer of the stomach seen between 1910 and 1920 were resectible, and between 1920 and 1930, over 22 per cent were resectible.

The Roentgen ray rarely fails to disclose definite signs of a malignant lesion in the stomach. However, there are other lesions which occur in and outside the stomach which may give rise to roentgenologic signs characteristic of gastric carcinoma. The real danger in many instances is that a lesion which is benign may be mistaken for one of a malignant nature and thereby prevent the institution of proper therapeutic measures. It is never satisfactory to depend on films alone in making a diagnosis of a gastric lesion.

The most significant roentgenologic sign of cancer of the stomach is the filling defect which is usually irregular in contour and of fixed location. It will be found that massage of the abdominal wall, manipulation, and antispasmodics do not in any way change the roentgenologic picture of the filling defect. Peristalsis is absent in this area and, as a rule, if the lesion is not high on the lesser curvature or confined to the cardia, it can be palpated. In the absence of any of the above characteristics, the diagnosis of cancer of the stomach is questionable. Not infrequently gas in the colon, pressure of the spine against the stomach, food masses, diaphragmatic hernias, advanced pregnancy, free fluid or large tumors in the abdomen, gastrospasm, hair ball, benign tumors, and syphilis, have been responsible for an erroneous diagnosis of cancer of the stomach.

The following case reports, which I will present in a brief manner, will illustrate some of the points mentioned above:

Case 1. Miss L. B., fifty-seven years of age, was examined December 26, 1928. Her family history was negative, but she had had a stomach disorder for one and one-half years. The pain occurred soon after meals and also two hours later, with food ease. The patient had lost no weight. The total acidity was 44 and free hydrochloric acid, 12. An x-ray of the stomach at this time showed a deformity at the prepyloric end of the stomach and a large perforating ulcer on the lesser curvature. A diagnosis of duodenal ulcer and perforating gastric ulcer was made. Surgical treatment was advised and refused. On April 23, 1930, she began to have more trouble. At this time a diagnosis of questionable malignancy was made, an operation insisted upon, and a large carcinomatous ulcer with extensive glandular involvement was found. I would emphasize in this case the fact that for a year and a half the patient had had a history characteristic of ulcer, with definite findings on the gastric side. It is particularly important in this type of case to advise early surgery.



Fig. 1. Miss L. B. Large perforating ulcer on the lesser curvature—malignant. One and one-half year's history.

Case 2. Mr. C. M., fifty-five years of age, was examined on April 26, 1932. His chief complaint was pain in the stomach of six months' duration, which occurred soon after meals, was gnawing in character and aggrevated by food. There was much night pain and sour stomach, and a weight loss of ten pounds. His distress was more constant and more severe when examined than at onset of trouble. Physical examination was essentially negative. The patient was well developed, had good color, and there was no evidence of anemia. There was a total acidity of 10 and free hydrochloric acid of 5. An x-ray showed a filling defect at the pyloric end of the stomach. A diagnosis of a lesion at the pyloric end of the stomach, probably malignant, was made and confirmed at operation when a partial gastrectomy was performed. As far as I can ascertain, the patient is now living and well.



Fig. 2. Mr. C. M. Large prepyloric filling defect Gastric ulcer on lesser curvature. Three months' history. Diagnosis—gastric carcinoma. Partial gastrectomy.

Case 3. Mr. F. H. N., forty-seven years of age, was examined on February 1, 1932. The family history was negative for cancer. His chief complaint, that of stomach trouble of many years' duration, was very characteristic of peptic ulcer. In the few months prior to his examination he had experienced less pain but more constant distress and had lost about twenty pounds in weight.



Fig. 3. Mr. F. H. N. Extensive filling defect lower two-thirds of stomach. Inoperable carcinoma. Peptic ulcer history of one and one-half year's duration.

This patient had been treated previously for ulcer of the stomach. Gastric analysis showed a total acidity of 30 and free hydrochloric acid, 16. An x-ray showed an extensive filling defect in the lower two-thirds of the stomach and a diagnosis of carcinoma of the stomach was made. Upon entering the abdomen we found the lesion to be inoperable. This case again emphasizes the fact that a comparatively young man with a very characteristic ulcer history may, and in this particular case did, have a malignant lesion of the stomach.

CONCLUSION

Cancer of the stomach is curable. Only 25 per cent of all cancers of the stomach come to the attention of the surgeon when they are resectible. More emphasis should be placed upon the importance of repeated fluoroscopic examinations, when unexplained dyspepsia is present in patients who are past forty years of age. Inasmuch as surgery offers the only hope for cancer of the stomach, these patients should be explored unless there is unmistakable evidence of inoperability.

THE RADIUM TREATMENT OF EPITHELIOMATA WITH REFERENCE TO CARTILAGE AND BONE

A. JAMES LARKIN, M.D., Chicago

The radium treatment of ulcerating malignant lesions close to bone and cartilage offers a problem worthy of study. A break in the continuity of the perichondrium results in an intractable ulcer with almost certain recurrence of the malignancy, so that cure of the lesion requires wide surgical removal. Denudation of bone by the disease or the treatment results in an ulcer which will not heal. The patient may survive for months or years with denuded bone. However, cure requires surgical interference in the form of sequestrectomy, or even more radical measures with subsequent plastic surgery. Nevertheless, valiant attempts should be made to effect a cure by radium treatment before sacrificing normal structures and producing distressing defects or disfigurements.

From the standpoint of radium therapy, epitheliomata may be classified into four groups:

1. Small lesions less than 3.0 millimeters in thickness, treated by unscreened radium in small doses.

2. Lesions from 3.0 to 5.0 millimeters in thickness, treated with screened radium in heavy dosage.

3. Lesions 5.0 millimeters or more in thickness, treated by heavy interstitial radiation.

4. Lesions involving cartilage or bone, amenable to palliation only by radium therapy.

Simple, small, thin epitheliomata of the glabrous skin are readily eliminated with unscreened contact radium in doses of 10 to 20 milligram hours per square centimeter. Permanent cure by this technic is almost the rule whether the lesion is of the basal or squamous cell type. The scar is negligible.

Similar lesions with an induration 3.0 to 5.0 millimeters in thickness are better treated by means of screened radium. The screen used is the beta ray screen (absorbs the beta rays), consisting of platinum of 0.5 millimeter wall thickness. We have observed better results from dosages delivered over a period of several days than from the same dosage delivered within a few hours. We are convinced that 125 milligram hours per square centimeter delivered in 96 or 120 hours result in more cures, milder reactions, less distress, less scarring, less deformity, and less disturbance of adjacent normal tissues than would be obtained with the same dosage delivered within a few hours.

The technic is adapted to the radium containers available. In using short implants containing 1.3 milligrams of radium each, the implants are placed 1.0 centimeter apart from center to center and are left in place 96 hours, delivering 125 milligram hours per implant. They are held in place between two sheets of gum rubber and are packed firmly against the lesion. The same spacing and rubber sheets are used when 2.0 milligram needles are employed, but the exposure is 120 hours, inasmuch as the radium distribution is such that 1.0 linear centimeter of the container carries 1.0 milligram of radium. In each type of exposure the dosage is 125 milligram hours per square centimeter. This method of application permits of treatment with smaller amounts of radium. The irregular

surfaces are readily conformed to by the flexible rubber applicators. Also, the container shapes itself to the surface, hardens slightly, and holds its shape while being removed to permit of irrigation and cleansing of the ulcerated surfaces.

Ulcerating, hypertrophic lesions of a thickness greater than 0.5 centimeter are not uncommon. They are usually of the squamous cell variety. The containers used are the same as for the lesions of 3.0 to 5.0 millimeters thickness, except that interstitial application is always employed. The distribution of the radium is the same; viz., 1.3 milligrams of radium per square centimeter of surface (of the base) in the case of implants employing a 96 hour exposure, with a dosage of 125 milligram hours per square centimeter; and 1.0 milligram of radium per square centimeter of surface (of the base) in the case of 2.0 milligram needles, employing a 120 hour exposure with a dosage of 120 milligram hours per square centimeter of surface. The containers are imbedded less than 0.5 centimeter from the base of the tumor and in a plane parallel to its base.

The principal advantage of this type of treatment lies in the relative harmlessness of screened radium in small amounts over several days so far as the cartilage and bone are concerned. These dosages with this technic do not denude bone or cartilage. Sufficient normal tissue is preserved over the perichondrium or periosteum to permit permanent healing. The results obtained by us with this technic have been gratifying and are set forth in the accompanying table.

Lesions in which the cartilage or bone are involved have not been cured or healed by us without employing surgical measures. Inhibition of growth, prolongation of life, and promotion of comfort are accomplished. In no case has healing occurred from radiation alone.

FIFTY CONSECUTIVE CASES ONE YEAR OR MORE AFTER TREATMENT; PERCENTAGE OF CURE, 76.0

Group	No. of Cases	Type of Lesion	Treatment	Results	% of Cures
I	22	Small, thin	Plaques	Well 20 Dead 2 (1 of erysipelas 1 of arsenical origin)	91.3%
II	14	3 to 5 mm. in thickness	Screened radium	Well 14	100%
III	7	More than 5 mm. in thickness	Interstitial radium	Well 4 Dead 2 Quiescent 1	57.1%
IV	7	Involvement of cartilage or bone	Screened radium	Living with the disease 7	

CYSTIC ARACHNOIDITIS

Walter D. Abbott, M.D., Des Moines

The symptoms of increased intracranial pressure, which is amenable to surgical intervention, are aptly described as the "brain tumor syndrome" and are characterized by headache, vomiting, and choked discs. However, an analysis of lesions of the brain illustrates the variability of symptoms, depending upon the location of the lesion, and although there is a great similarity in the clinical pictures, an understanding of the underlying pathologic process is of value. While tumor or abscess is the predominant factor, there remain a few cases which are the result of trauma or inflammation, and these cases present a clinical picture similar to that of an indeterminate brain lesion.

The lesion is a result of infection or injury to the delicate arachnoid and the end result consists of a thickening of this membrane with an encapsulation of bloody or xanthochromic cerebrospinal fluid. This phenomenon may involve either cerebral hemisphere, presenting Jacksonian convulsions or a paralysis of the extremities on the opposite side. The optic chiasm may be involved with a loss of vision, or defects in the visual fields may ensue. Occasionally this condition may occur in the posterior fossa of the skull, and symptoms of cerebellar tumor may present themselves. This type of lesion interferes with the circulation of cerebrospinal fluid, and internal hydrocephalus is the result. While such a condition may be suspected, operation is necessary to verify the diagnosis and to remove the underlying pathologic process.

Until recently, it was believed that cystic arachnoiditis was only the result of a pre-existing infection, but the subsequent case reports will illustrate the importance of trauma as a causative factor. In spite of a thorough history, the severity of an accident is often minimized, and it is of utmost importance to consider the symptoms of any head injury with especial reference to coma, confusion or emesis. If any one of these symptoms is present, it is safe to assume that hemorrhage may have taken place in the subarachnoid space.

Not infrequently, the patient presents a picture of increased intracranial pressure, and it is necessary to resort to encephalography or ventriculography before a definite localization is possible.

The following case reports are descriptive of arachnoiditis:

Case 1. A girl, nine years of age, was admitted to the hospital because of headache, blindness and stupor. She had been well until two years of age when she suffered from frequent colds. Following a tonsillectomy, this child was well until September, 1930, when her teacher noticed that she was unable to keep up her school work. A short time later she suffered a severe attack of influenza. Following that illness her vision rapidly failed, she complained of headache, and became stuporous on October 24, 1930.

Examination revealed a thin, pale child who would not respond to stimuli. Urinalysis was negative, the leukocyte count was 14,000, and the Wassermann test was negative. The optic fundi showed evidence of bilateral choked discs, with beginning secondary optic atrophy.

Neurologic examination revealed no change in the reflexes, and it was necessary to perform ventriculography to effect a localization of the lesion. When the head was shaved, a scar was noted over the external occipital protuberance. Ventriculograms indicated a pushing up of the posterior horns of the lateral ventricles, and it was decided to carry out a suboccipital exploration. On October 30, 1930, this was done and a large cyst was seen compressing the cerebellar lobes. The walls of the cyst were thickened, and on opening the sac, five ounces of old bloody fluid were removed. After resecting the walls of the cyst, the wound was closed in the usual manner. Recovery was uneventful, and within ten days the vision returned. A recent communication from the mother reports that this child is normal and carrying on her school work in a satisfactory manner.

This case is of interest because of the mixed rôles of inflammation and trauma. Despite repeated questions regarding injury, no history could be elicited until the scar was detected when ventriculography was performed, and then the parents recalled an automobile accident three years previously where the child had been dazed and had vomited once. Undoubtedly there was a subarachnoid hemorrhage at that time, which may have been accentuated by subsequent infections.

Case 2. A woman, forty-one years of age, was admitted because of emotional instability and a left hemiplegia. The past history was negative except for repeated attacks of tonsillitis and a toxic adenoma of the thyroid which had been removed four months previously. For ten days prior to admission, the patient complained of loss of memory, emotional instability, and numbness of the left arm and leg. Four days before, there was an onset of paresis of the left extremities which developed into a frank paralysis. Examination of the spinal fluid revealed a pressure of 34 cm. of water and three cells. The urinalysis, blood count and Wassermann tests were negative. Physical examination was negative, and there was an exaggeration of the reflexes on the left with the Babinski, Gordon and Oppenheim tests. Blood pressure was 120/78, and the optic fundi showed no change in the discs or retinal vessels. X-rays of the skull were negative.

Because of the definite localization, a tumor of the right frontoparietal region was suspected, and on November 28, 1930, an osteoplastic flap was turned over the right frontoparietal region. A cyst presented itself in this region, and the arachnoid was definitely inflamed and thickened. On opening the sac, three ounces of thick yellow fluid were removed. After dissection of the wall of the sac, the wound was closed in the usual manner. On the third postoperative day, the patient could move the left arm and leg, and in two weeks she was able to walk unaided. When examined recently, she appeared to have made a complete recovery.

The above case illustrates the typical inflammatory history and the usual type of cystic arachnoiditis with no evidence of trauma.

Case 3. A woman, fifty-four years of age, was admitted because of severe headaches and emotional instability. Six months before, she fell and sustained a left basilar skull fracture with bleeding from the left nostril and ear. She was unconscious for three days and was kept in bed for three weeks. On arising, she suffered severe, generalized headaches, and became extremely irritable.

Examination was essentially negative from the physical, neurologic and laboratory standpoint, and because of the absence of localizing signs, encephalography was performed June 1, 1931. This revealed a compression of the left temporal lobe. On exploration, a cyst with thick, red walls presented itself under and lateral to the left temporal lobe. Incision of the sac brought forth three ounces of old bloody fluid. On removing the walls of the sac, the wound was closed without drainage. The patient obtained immediate relief from her headaches, and left the hospital in ten days.

However, the headaches returned in two months and failed to respond to treatment. On February 5, 1932, the wound was reopened but no pathologic process could be located, and again the patient obtained relief for a short time. Then the headaches returned with equal intensity. These persisted for many months, but in about a year gradually became less severe so that in January, 1933, she was able to resume her occupation as a school teacher.

This case again illustrates the role of trauma in the production of an arachnoid cyst. The recurrence of the headaches was probably the result of an interference in the cerebral circulation.

SUMMARY

The above cases of cystic arachnoiditis are typical of most phases of diagnosis, and are reported to emphasize the importance of trauma as an etiologic factor.

Case Report

CONGENITAL VALVES OF THE PROSTATIC URETHRA

Lawrence E. Pierson, M.D., Sioux City

A male child, six months of age, was admitted to St. Joseph's Hospital, October 12, 1932, with acute urinary retention. He was referred by Drs. J. A. Thompson and R. McBride, who had catheterized him the day previously and obtained six ounces of clear urine. The baby had passed no urine for a period of three days previous to the catheterization. Analysis of the urine showed 2 plus albumin and an enormous number of pus cells. The previous history of the child was interesting. At birth he weighed three pounds; three months later he weighed over six pounds. Acute retention had developed at the age of six weeks, but was apparently controlled by a single catheterization. A significant point in the history was the fact that the child was always wet, requiring as many as forty diapers daily. During the past two or three weeks the mother had noticed the child straining at frequent intervals.

Entrance examination revealed the child to be markedly emaciated and continually straining as though attempting to urinate. Small amounts of urine passed at intervals, a true paradoxical incontinence. The bladder was markedly distended. With the exception of a phimosis, the external genitalia appeared normal.

The laboratory findings were reported as follows: red blood cells 4,530,000, hemoglobin 80 per cent, and white blood cells 16,200. Phthalein output registered 45 per cent in two hours and fifteen minutes. Blood, Wassermann, and Kahn tests were negative. Chemical examination of the blood showed 30.0 mgm. of nonprotein nitrogen and 15.0 mgm. of urea nitrogen per 100 c.c. of blood.

A plain x-ray of the urinary tract revealed no abnormal shadows, but cystogram demonstrated a large dilated bladder, extending almost to the umbilicus. Definite dilatation of the posterior urethra was seen, typical for congenital valves of the prostatic urethra. There was no regurgitation into either ureter. (See Fig. 1.)



Fig. 1. Cystogram showing dilatation of posterior urethra, indicated by A. Note dilatation of entire bladder.

With the patient under ether anesthesia, the bladder was opened and the valves destroyed by passing bougies downward through the urethra. Closure was made with a urethral indwelling catheter and a suprapubic drain as an extra safeguard. On the following day the child developed a severe abdominal distension, which proved very distressing to both patient and physicians, in that it strongly resisted such therapeutic measures as gastric lavage, enemata and eserine. His general condition was considerably complicated by this situation and as a last resort, both drains were removed, in view of a possible reflex etiology of the distension. After a period of five days, the distension gradually disappeared. An attempt to reinsert the urethral catheter revealed the fact that the prostatic urethra had grown shut at the point where the denuded surfaces had come in contact. Consequently a second cystotomy was required, at which the obstruction was overcome by means of a sound passed through the urethra and out through the cystotomy wound. A 10 F soft rubber catheter was fed onto its tip and pulled through the urethra in such a fashion that its tip

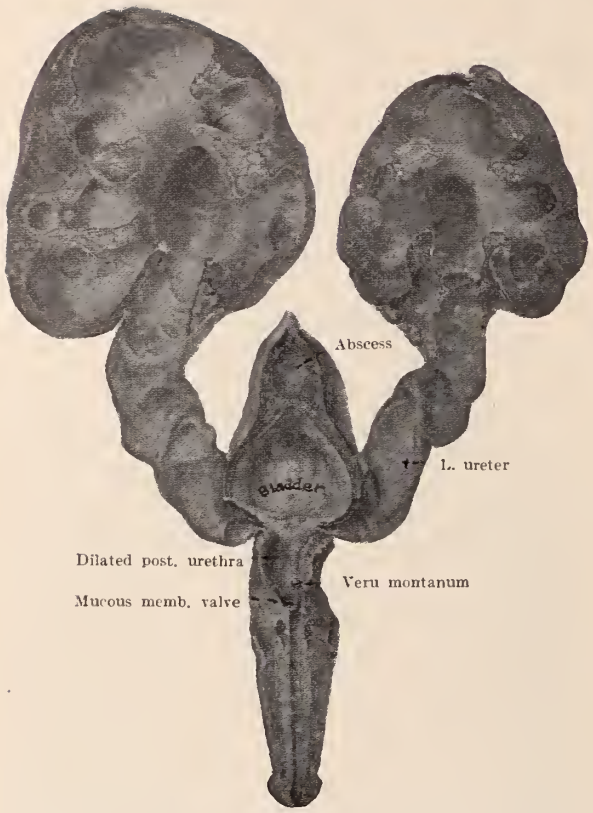


Fig. 2. Autopsy specimen taken from Kretschmer and Pierson, showing valve and resulting dilatation of both ureters and kidneys. A perivesical abscess was an additional complication in this case.

protruded through the incision, where it was immobilized with a safety-pin. The lower end was immobilized in a similar fashion, immediately beyond the external meatus. Such an arrangement precluded withdrawal of the catheter in either direction. Multiple holes in the intravesical portion enabled free drainage. As granulations progressed in the incision, the catheter was drawn downwards in such a manner that suprapubic healing was not interfered with.

He left the hospital November 23, healed suprapubically and urinating a natural stream. Further postoperative care has included occasional dilatation of the urethra, with a 10 F catheter, which enters without the slightest obstruction. The child has gained in weight and at present (five months after operation) is of normal weight and strength for his age. He urinates a normal easy stream and seems perfect in every way.

COMMENT

Congenital valves of the prostatic urethra constitute a very unusual and interesting finding. After a few scattered case reports, the lesion was established as a definite clinical entity by Tolmatschew in 1870. A survey in 1929 revealed the total number of cases reported in the literature as 67.

At autopsy, these valves are found to consist of fine epithelial veils, resembling the semilunar valves of the heart. The verumontanum is the usual point of attachment and from here, the folds may course downward toward the anterior urethra (group 1) or backward toward the bladder (group 2). A third group consists of an epithelial diaphragm across the urethral lumen, with a small pin-point orifice.

In general, the symptoms are obstructive in nature. Dysuria and acute retention lead the list. A frequent complaint is that the child is always wet, while later in life, urination is easier to perform in the sitting position. Cases in group 2 may have acute retention, and at the same time, present not even the slightest obstruction to catheterization.

Symptoms do not necessarily manifest themselves in early life, as is evidenced by the fact that cases are reported up to the age of fifty-seven. Such instances can be explained by implantation of a subsequent infection upon the epithelium of the valves, where the resulting edema is sufficient to produce complete obstruction in a urethra which under normal conditions would present no difficulty. Also, prostatic hypertrophy and urinary calculi constitute potential secondary factors of obstruction.

Therapeutic management and prognosis are largely governed by resulting complications, particularly renal damage. The problem is similar to that resulting from prostatic enlargement. That congenital valves can and do result seriously is well illustrated in a series of cases, reviewed by Young and McKay in 1929. Out of sixty-six cases, fifteen patients were six months of age or less. Regardless of the type of treatment rendered, the only surviving patient was a six months' old child, treated by cystotomy, as in the case herewith reported. Of the fourteen who died, nine were found at autopsy to have bilateral hydronephrosis and hydro-ureter.

The most important factor in successful treatment, exactly as in the case of the old prostatic, lies in early recognition, before serious complications can make their appearance.

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State Health Commissioner's Page

D. C. Strickler, M.D.

Method of Reporting Infectious Diseases Revised

The reporting of cases of communicable disease is fundamental. It shows the extent of disease prevalence and indicates the need for control measures. The only reliable means of gauging disease prevalence is through reports from physicians who attend cases of infectious disease. The method of reporting should be as simple as possible, and should require a minimum amount of clerical work. Furthermore, reports should reach the State Department of Health by the most direct route, and without delay. The section of Rules and Regulations dealing with reporting has been revised with these points in mind. The State Department solicits the continued cooperation not only of those who have faithfully reported infectious diseases in the past, but of all physicians who from time to time attend these cases. It is hoped that the revision in method will make for more complete reporting of communicable disease prevalance in Iowa.

The subject of reporting was discussed at a meeting of the State Board of Health, held May 11, 1933, at which all members were present. The following revision of Section VII in the Rules and Regulations, has been adopted by the department and approved by the Commissioner of Health:

SECTION VII. REPORTING

A. **Reports of Cases.**

1. By the attending physician.
   a. Every physician shall, on diagnosing a case, mail to the State Department of Health, a report of said case on a report card, giving all the information desired on such card.
   b. The physician shall, before mailing the report to the State Department of Health, report said case by telephone, in writing or otherwise, to the local health officer having jurisdiction, giving the name of the disease, date of onset, patient's name, age, sex, color and other information desired.
   c. The physician shall mail to the State Department of Health a report of secondary cases which develop in a home and of which he may have knowledge.
2. By the local health officer.
   a. The local health officer shall record the information received from attending physicians in a record book kept for this purpose, as outlined in Section 2236, Code of 1931.
   b. He shall mail to the State Department of Health a weekly summary of all cases reported to him, on blanks furnished for that purpose and obtainable from said Department.

B. **Special Reports.**
For reporting gonorrhea or syphilis, special blanks are obtainable at the office of each city clerk or health officer. These must be filled out and submitted directly to the State Department of Health, except when the case occurs in the jurisdiction of a full time municipal or county health officer, in which instance such report shall be sent to such officer, who shall immediately forward same to the State Department of Health as the official report of the case.

C. **Who Must Report.**
1. The chief responsibility for reporting rests upon physicians and health officers, reports tc be forwarded to the State Department and to the local health officer as outlined in article A.
2. In the absence of an attending physician, *nurses* shall report to the local health officer such case or cases as come under their observation.
3. In the absence of an attending physician, any superintendent, teacher, parent or other person, shall report to the local health officer such case or suspected case of which he has knowledge.
4. All licensed embalmers must report to the local health officer, when they are called to embalm the body of a person, whose death certificate certifies that the primary or secondary cause of death was one of the diseases mentioned in Section VI of these Rules and Regulations.

D. **New Cases in Same Home.**
Every new case of a reportable disease developing in a family where one case already exists, shall be reported to the attending physician or the local health officer.

E. **Special Method of Reporting Venereal Diseases.**
Immediately after the first examination or treatment of any person with any venereal disease, the physician giving the same shall mail to the State Department of Health a report stating the case number, age, sex, color, marital condition, occupation, name of the disease, probable source of infection and duration of the disease, except when the case occurs in the jurisdiction of a full time municipal or county health officer, in which instance such report shall be sent direct to such officer, who shall immediately forward same to the State Department of Health.

F. **Printed Cards.**
On which attending physicians may report cases of any of the diseases mentioned in Section VI may be obtained from local health officers or from the State Department of Health upon application.

The JOURNAL of the Iowa State Medical Society

ISSUED MONTHLY

RALPH R. SIMMONS, Editor.....Des Moines

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LESS PRACTICE—MORE STUDY

The study of medicine is an intellectual pursuit, and the individual who launches his bark on this sea must soon realize that if he is to steer a straight course and progress toward that coveted haven of affluence and respect accepted as the measure of success, he must continue his pursuit of learning with heroic diligence.

In testimony of this unrefutable premise one needs but glance through almost any one of the many high grade medical journals available to every physician. We readily appreciate the fact that the theories of yesterday regarding both diagnosis and treatment may be proved absurdities of today, or that the secrets of the unknown maladies of a decade ago are today revealed and studied in a comprehensive manner.

It has been charged that physicians know more about medicine upon graduation than they ever know at a later period. If this charge is ever true, it is certainly only true with the minority. The recent annual session of the Iowa State Medical Society bears brilliant testimony of the sincerity of the physician to acquire greater scientific learning. In spite of financial depression, poor collections, poor investments, and the devastating inroads upon morale which have resulted from these conditions, nine hundred Iowa physicians (including guests and exhibitors) registered at the Eighty-second Annual Session held in Des Moines. From the standpoint of attendance, this was the greatest meeting in the history of the Iowa State Medical Society. With a twenty per cent reduction in membership from that of 1931, the attendance was less than two per cent below that of the 1931 registration at which an all time record of attendance (910 members, guests and exhibitors) was established.

I would cite another evidence that the Iowa physician is keeping faith and meeting the obligation of keeping abreast with new discoveries and advancements in medicine. During this last annual session of the society, the writer took occasion to visit with a majority of the exhibitors and questioned them rather closely regarding the success of their particular exhibits. Two facts were outstanding: first, the exhibitors with one accord stated that during the presentation of papers in the lecture room the physicians were conspicuously absent in the halls and in the rooms used by the exhibitors; second, that when rest periods permitted the doctors to visit the exhibits, the physicians were eager to learn of the advancement or perfection in the particular exhibitor's product, and that but few were satisfied to pocket their samples and depart. Most of them wanted an actual demonstration or detailed information regarding the products exhibited. One old exhibitor voluntered that he had never attended a state or national meeting in which greater interest was manifested in the scientific aspect of his particular exhibit. He sagely observed, "One gets the idea that since most physicians are less busy with a profitable practice, they are more busy keeping in a healthy frame of mind by study and research."

However, the cynic might inquire, "Where were the eleven hundred members who did not attend the annual session? Does not the fact that something less than half of the total membership of the society attended the annual session refute the very argument which you have presented?" A moment's thought will demonstrate the unfairness of such a pessimistic view. Who would care for the local community if all the physicians attempted to attend meetings at the same time? The show must go on. People will become sick, have appendicitis, babies, and fits, just the same when the society is in annual session as at any other time. The eleven hundred members who were not at the sessions were at home caring for the sick. Some of them, no doubt, will look forward to reading the papers presented at the session as they appear in THE JOURNAL during the next few months. Others may feel that bigger fish lie in greater waters, and will attend the annual meeting of the national association in Milwaukee. Others may wish to follow their particular lines of study through monographs or texts prepared by eminent authorities. A lesser number will attend some of the many clinics offered in this country and abroad during the year.

After the sieve has been shaken and all of these various groups removed from the hopper, the few —and I mean few—remaining, unclassified and nondescript physicians who are unwilling to make the necessary sacrifice of time and money required for professional advancement, would be conspic-

uous because of their scarcity. The financial trial of the past few years has not induced the mental or cultural lethargy which might have been predicted. Having chosen a profession of "diligent and persistent study," the physician "carries on."

THE SUN WORSHIPER

Throughout the period of recorded history man has respected the sun, not only as a source of light and heat, but also for its health promoting qualities. The early annals of history tell us of great temples built to the sun gods and how these temples contained large galleries for nude sun bathing. The Greeks prayed for health to Apollo, their sun god; the Egyptians to Ra; the Israelites and Philistines to Baal; and the Persians to Mithras, their sun god. Herodotus and Hippocrates extolled the benefit of the sun bath in restoring muscular tone and ascribed to it healing powers for mental and physical ills.

During the past few years, both the physicians and the laity have shown a renewed interest in the curative value of the sun's rays. That this reawakening of interest in the health promoting qualities of sunlight is of great benefit cannot be doubted, particularly when we consider that a very large section of our people today live and work indoors and are consequently shut off from the natural sources and benefits of sunlight. However, sun bathing like other therapeutic procedures easily understood by the laity, has been perverted by them into a curative fad; and when a therapeutic principle becomes a fad it is usually greatly overdone or otherwise abused. It is at this time of the year especially that a note of warning must be sounded to the would-be "sun worshiper."

In 1800, Sir William Herschel demonstrated that unfiltered sunlight contains not only the band of visible light with which we are all familiar, but also a band of heat producing rays, lying beyond the red end of the visible spectrum, which he called infra-red rays. One year later, Johann Ritter demonstrated chemical rays beyond the violet end of the visible spectrum, which he designed as ultraviolet rays. The ultraviolet ray produces no immediate sensations in the skin and for this reason the sun bather may receive an overdose of this ray with no warning of his overindulgence except that given by the heat producing infra-red ray. This warning is absent when the ultraviolet ray is reflected, as from the surface of the water. An overdose may be mild and produce only a painful reddening of the skin, or it may be so severe as to produce signs of serious derangements of vital function, and in extreme cases, even death.

Several factors are to be appraised in determining the proper dose of sunlight for each individual. First, the various types of skin texture and skin pigmentation must be considered. These range from the soft, unpigmented skin seen in the natural blonde, through varying degrees of pigmentation, to the swarthy deeply pigmented skin of the true brunette. We must further recognize that certain skins are capable of producing a protective tan, while others fail to respond in a similar fashion. The reaction of any individual to the light rays may be foretold with much accuracy by a simply performed skin test.* If the would-be sun bather could be induced to consult his physician before attempting to acquire a season's tan, much discomfort and loss of time and money might be prevented. It is estimated that in this country every year 200,000 working days are lost because of illness due to sunburn. This loss of time represents an annual loss of $1,400,000. In the majority of cases the sunburn is deliberately and intentionally acquired. With the first warm days of summer certain enthusiasts voluntarily and intentionally expose large areas of their bodies for considerable periods of time in order to acquire the nut-brown tan so popular, particularly with the younger sets. We are all familiar with the vacationers who, on the first day of their trip to the lake or seashore, sit for hours in the sun near the water's edge, attempting to get a sunburn, and spend the rest of their vacation, painfully nursing sunburns, which not only spoil their outing but result in most instances in a mottled, scaly or disfiguring tan, if any tan at all is produced.

Unfiltered sunlight, especially during June, July, and August, and between the hours of 10:00 a. m. and 2:00 p. m., must be indulged in with great caution if one would receive the benefit and escape the dangers of sun bathing. If one must acquire a coat of tan, the exposures to the sun's rays should be short and governed entirely by the reaction of the skin to these short exposures. Having determined the dose of sun rays the skin will stand and, allowing for some degree of increasing tolerance to the rays, the time may be lengthened daily until the desired tan is acquired or it is definitely demonstrated that the skin is one which will not acquire tan. If the individual belongs to that class of persons whose skin will not tan, it is folly to persist in the practice of sun bathing other than for very short exposures.

*Using the unexposed flexor surface of the patient's forearm, a cuff of protective material (cotton sheeting) is applied in such a manner as will permit the exposure of predetermined areas of skin to the sun's rays, for varying lengths of time. This is readily accomplished by supplying the cuff with six to ten small "windows," with covers which may be removed at will.

CYTOST CAUSES MORTALITY

Surrounded by the living, man has forever been baffled by the nature of life itself. Much is known concerning the manifestations of life, but nothing, or practically nothing, has been discovered of the essence of life. Notwithstanding, and perhaps because of this fact, many of the most brilliant minds in the scientific world have at one time or another been attracted to this problem.

Primitive man accepts birth as a natural phenomenon, but in the presence of death from natural causes he is inspired with awe. He has created spirits and demons to explain senescence and death, and on the same basis explains life. As man advances in the scale of evolution his god becomes less of a demon and he finally ascribes to a single god the attributes of his many divinities. In our present state of civilization the secrets of life and death are most commonly considered as evidences of the omnipotence of God. Scientific investigators are rarely satisfied by this diestic theory, and for this reason scientific investigation continues, and although the essence of life is undiscovered much is known concerning its many manifestations.

Collectively cells are mortal and surely die. Individually cells may be immortal. Woodruff and his students have demonstrated this cellular immortality. Paramecium, a common ciliate was found during a period of years to pass through several thousand generations without the intervenion of natural death. Similarly Carel and Ebeling have shown that connective tissue taken from the chick's heart may be kept alive in the laboratory for years, far exceeding the life span of the fowl. If these observations are indicative of cellular immortality in so far as unicellular organisms are concerned, it logically follows that all cells may individually possess the quality of immortality, and it is only in organized masses that they lose this quality.

Upon this line of reasoning the late Dr. Fenton B. Turck has elaborated his theory of the action of the living cell which throws light notably upon the processes of life and senescence and also upon the problems of shock. It would seem a far cry, indeed, from the renewal of soil in plant propogation to researches in cellular physiology and the essence of the life processes. Turck fills this gap by a brilliant series of intensive experiments and painstaking observations conducted over a period of forty years.

To explain that element in the environment of a cell which produces first, shock and if frequently repeated, senescence and death, Turck describes a substance elaborated within the cell, to which he gives the name cytost. This substance appears to be capable (depending upon its concentration) of either exerting a stimulating or toxic action upon the cell with which it comes in contact. Mild tissue irritants produce hyperplasia. More concentrated or prolonged irritants produce cell death and autolysis, the cytost liberated in the first case having stimulative qualities, whereas in the latter instance its action was overwhelming and depressing.

If an elastic ligature is applied to the leg of a cat under anesthesia; the circulation completely restricted for a period of an hour and a half; the ligature then removed and circulation re-established, the animal develops shock and dies. If, however, the ligated leg is amputated at the end of the hour and a half period without a resumption of circulation, the animal makes an uneventful recovery and shows no element of shock. Curiously, if a portion of muscle is removed from the ligated leg and transplanted into the animal proximal to the ligation, shock occurs. Or if a portion of the traumatized leg is extracted after maceration and injected into an animal of the same species, shock occurs, whereas the maceration and injection of healthy muscle produces no such effect. What has occurred to the muscle tissues in the area of restricted circulation? Obviously a poison has been produced by the cells themselves sufficiently potent in character to poison other body cells, a poison which manifests itself in varying degrees of shock.

This toxic substance, cytost, may represent the difference between the immortality of the unicellular organism, which through a change of medium escapes its cytost, and the mortality of fixed tissues unable to rid themselves sufficiently rapidly of this element. The theory explains many natural phenomena. It explains shock, senescence, natural death, mortality, and immortality.

While approaching to an intriguing degree the problem of life itself, it falls short of being satisfying in explaining the essence of life—that spark of kinetic energy which distinguishes the living from the dead.

The work is unfinished and the master is dead. It remains for another to pick up the tools where Dr. Turck has dropped them and carry forward the experiments of which he dreamed for the future. This life work is a stone, and an invaluable one, in the structure of science. No one can appreciate its importance until the structure is finished and the goal attained. When this is accomplished the mystery of life itself will be explained.

ANNOUNCEMENT

The Board of Trustees, together with the Secretary, in regular meeting on June 1, 1933, appointed Mrs. Dorothy McCarthy as Executive Secretary of the State Society for the period of one year, beginning June 1st. This appointment was made under the authority of Chapter VI, Section 5 of the by-laws, as amended at the annual session of 1933: "It may appoint, together with the Secretary, an Executive Secretary of the Society; . . ."

The annual session of 1928 authorized the Board of Trustees under Chapter VI, Section 5 of the by-laws, to establish the office of Managing Director. A director was appointed, who began his services July 1, 1928. At the regular June meeting of the Board of Trustees in 1932, no appointment was made.

During the past year the work of that office has been carried on by Mrs. McCarthy, with no decrease in the activities or change in the objectives of the four previous years of the Society. In recognition of her able and efficient service in carrying out the multitudinous duties of chief clerk, Mrs. McCarthy was elected to the office of Executive Secretary.

Board of Trustees
Oliver J. Fay, *Chairman*
E. M. Myers
John I. Marker

ANNUAL MEETING, MILITARY SURGEONS CLUB

The annual meeting of the Military Surgeons Club of the Iowa State Medical Society was held Wednesday, May 10, during the recent annual session of the state society. The six-thirty dinner was attended by sixty members, after which Major General M. A. Tinley, of the Iowa National Guard, spoke on the value of that organization. Major Harding Polk, Cav., U. S. A., gave the principal address of the evening on "National Defense". In his discussion, Major Polk stressed the need of abiding more closely to the national defense act, which is this nation's insurance policy. Two resolutions were adopted; one as opposing the proposed reduction of national guard training, and reduction in the personnel of the regular army; and the other commending Governor Clyde Herring on preserving law and order in western Iowa by sending out the national guard to maintain respect for constituted authority. Earl Bush, Lieut. Col., Med. Res., acted as toastmaster.

Officers were elected for the ensuing year as follows: Thomas F. Suchomel, Capt. Med. Res., Cedar Rapids, chairman; Harold A. Spilman, Lieut Col. Med. Res., Ottumwa, vice chairman; and Aaron C. Conaway, Col. Med. Res., Marshalltown, secretary.

GOLF AT A. M. A.

The American Medical Golfing Association, headed this year by Dr. John Welsh Croskey of Philadelphia, will hold its Nineteenth Annual Tournament over the Blue Mound Country Club Course, Milwaukee, on Monday, June 12th. Play will begin at 8:00 a. m., with all teeing off on the beautiful and interesting Blue Mound course before 3:30 p. m. Dinner will be served at the Club at 6:30 p. m., followed by distribution of approximately fifty trophies and prizes for the eight major events covering both 36-hole and 18-hole play. Past President Frank A. Kelly of Detroit, will be on hand with his inimitable stories. For further details, address Wm. J. Burns, Executive Secretary, 4421 Woodward Avenue, Detroit, Michigan.

ANNUAL MEETING, AMERICAN PROCTOLOGIC SOCIETY

The American Proctologic Society, organized for the purpose of "investigating and disseminating knowledge relating to the rectum, anus and colon," will meet in annual session in Chicago, Monday and Tuesday, June 12th and 13th, with headquarters at the Stevens Hotel. Physicians who are regular and orthodox practitioners and members of the American Medical Association, are invited to attend.

Of the twenty-six addresses which will be delivered before the meeting, a very large number are expected to be of especial interest to the general practitioner.

FINLEY HOSPITAL LABORATORY EXHIBITS AT AMERICAN ASSOCIATION MEETING

Those physicians who visited the exhibit of the Finley Hospital Laboratory at the recent meeting of the state society will not be surprised to see the announcement that the Finley Hospital Laboratory will have an exhibit at the annual meeting of the American Medical Association at Milwaukee. Announcement has been made by Dr. F. P. McNamara, director of the Finley Hospital Laboratory, that the Committee on Scientific Exhibits of the American Medical Association has granted his application for space at the annual session to be held at Milwaukee. Finley hospital authorities are gratified at this recognition of the development of the department of pathology since usually only medical schools, endowed or subsidized hospitals and laboratories or national scientific societies are allowed to exhibit.

The Finley hospital exhibit will consist of unusual pathologic specimens from the museum. In making the announcement, Doctor McNamara emphasized that the development of the museum would have been impossible without the whole-hearted support of members of the Dubuque County Medical Society and the hospital medical staff and that the permission to make the exhibit was a compliment to the progressiveness of the two societies.

The Journal congratulates the Dubuque profession for this outstanding accomplishment, which signally reflects credit upon the entire medical profession of Iowa.

THE PRESIDENT'S PAGE

For the ensuing year I have no marvel program. However, I have a few objectives.

I hope to ferret out the younger men who will become active, if given an opportunity. While young and enthusiastic, they are the "white man's hope."

I shall stress the importance of maintaining the county unit. Unless the county unit is maintained, that county becomes a blank in the state affairs. It will either have no voice or the voice will be so faint as to carry no conviction.

I hope to have a program next May—mostly furnished by Iowa talent—that will be so attractive, that even the least enthusiastic will want to hear it.

I do not expect one hundred per cent support, but I shall work for it and will appreciate all that I get.



President, Iowa State Medical Society.

COMMITTEE APPOINTMENTS

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John H. Peck, Chairman.....Des Moines
Channing G. Smith.....Granger
James C. Donahue.....Centerville

Finance Committee

Ernest C. McClure, Chairman.....Bussey
Andrew W. Bennett.....Iowa City
E. B. Williams.....Montezuma

Medico-Legal Committee

Frank A. Ely, Chairman.....Des Moines
George C. Albright.....Iowa City
F. Earl Bellinger.....Council Bluffs

Committee on Public Policy and Legislation

Thomas A. Burcham, C'h'm.....Des Moines
Frank L. Williams.....Des Moines
Peter A. Bendixen.....Davenport
Charles B. Taylor.....Ottumwa
Robert L. Parker.....Des Moines

SPECIAL COMMITTEES OF THE HOUSE OF DELEGATES

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E. D. Plass.....Iowa City
J. D. Boyd.....Iowa City
Lee F. Hill.....Des Moines
H. E. Farnsworth.....Storm Lake

Historical Committee

Walter L. Bierring, Chairman..Des Moines
Frank M. Fuller.....Keokuk
Thomas B. Throckmorton.....Des Moines
John T. McClintock.....Iowa City
Henry B. Young.....Burlington

Medical Economics Committee

Corwin S. Cornell, Chairman.....Knoxville
James C. Hill.....Newton
E. L. Wurtzer.....Clear Lake
R. M. Sorensen.....Cumberland
T. A. Moran.....Melrose

Medical Library Committee

Felix A. Hennessy, Chairman.....Calmar
C. R. Harken.....Osceola
Jeanette Dean-Throckmorton....Des Moines

Military Affairs Committee

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Harold A. Spilman.....Ottumwa
Mark C. Jones.....Boone

Committee on Superannuated Physicians

William F. Amdor, Chairman.....Carbon
W. S. Greenleaf.....Atlantic
Fred G. Murray.....Cedar Rapids

Woman's Auxiliary Advisory Committee

Emil C. Junger, Chairman.....Soldier
O. A. Kabrick.....Grandview
James M. Donelan.....Glenwood
P. B. McLaughlin.....Sioux City
E. B. Howell.....Ottumwa

SPEAKERS BUREAU ACTIVITIES



Postgraduate Course, Waterloo, Iowa

MEETINGS OF MERIT

The postgraduate group at Waterloo has earned the distinction of having the "Meetings of Merit". Since March 9, this group of approximately 125 physicians from Black Hawk and surrounding counties have met for five or more hours on Thursday of each week to take the postgraduate course at Waterloo. Doctors came from as far as Calmar, Charles City, Marshalltown and other places equally distant. In spite of the fact that some of the meetings were held during the time of high waters and flooded highways, the attendance of this group was never less than one hundred. The picture above shows this group at one of its regular weekly meetings.

This represents the largest enrollment for any postgraduate course given in Iowa, and undoubtedly surpasses the enrollment for any similar course given in a locality of this kind anywhere in the United States. It may be credited to the untiring efforts of T. U. McManus, M.D., and L. C. Kern, M.D., the excellence of the course given, and the progressive enthusiasm of those taking the work.

ATTENTION!

Plans are now being developed for postgraduate courses to be given this fall. It is the aim of the Speakers Bureau to make these courses available in all sections of the state, so that every member will have an opportunity, at one time or another, to take advantage of the work offered. It is also our aim to offer these courses only where they are actually wanted. Therefore, if any county or district society is interested, they should immediately communicate with their councilor, or The Speakers Bureau, Iowa State Medical Society, Des Moines.

RADIO BROADCASTS

Winneshiek County

Some time ago it was announced that the Winneshiek County Medical Society was starting a schedule of weekly health talks over the radio station at Decorah. Just recently they completed a contract with Radio Station KGCA, extending from April 21, 1933, to April 13, 1934, for one fifteen minute period weekly. This period is scheduled on Fridays at 12:45 p. m.

They have the year's schedule of talks outlined in advance, with appropriate and valuable subjects for every season and occasion. The talks are to be furnished by the American Medical Association and by the Speakers Bureau of the Iowa State Medical Society. They will be presented by members of the Winneshiek County Medical Society. By rotating this responsibility among the membership, each member is called upon about four times during the year. These doctors are to be highly commended for their willingness to come to Decorah from all parts of the county in order to successfully carry out this project in the interests of preventive medicine and public health.

Woodbury County

The Woodbury County Medical Society has joined the steadily growing ranks of county medical societies which are assuming the responsibility of broadcasting health talks from their local radio stations. The Bureau congratulates the members of the Woodbury Society on this action and will be glad to publish the time of their broadcasting period as soon as final arrangements are completed so that physicians near Sioux City may tune in. The talks to be given will be furnished by the Speakers Bureau.

WOMAN'S AUXILIARY NEWS

Edited by the Press and Publicity Committee

MRS. OLIVER J. FAY, *Chairman*

10 Thirty-fifth Street, Des Moines

GREETINGS TO ALL AUXILIARY MEMBERS

May-time again brought to a close another year of accomplishment for the Auxiliary in Iowa and since there is a certain glory and satisfaction to be claimed in facing facts, your officers and committee chairmen rejoice to report that our fourth milestone was marked as one of progress. Our growth, though slow, shows strength and momentum gained, and the existence of an auxiliary justified. Eleven counties have been organized with a membership of nearly three hundred women. The great Iowa State Medical Society has placed its stamp of approval upon this organization and wishes it to succeed and advance as rapidly as possible. We therefore have no hesitancy in urging all to become interested and active members and join with us in meeting the challenge which is ours with a broader vision and greater determination to make the Auxiliary mean to us and the Iowa State Medical Society all that it was intended to be.

Let us bear in mind that it is the medical profession for which we are organized and working; that we have one bond in common, that of promoting the interests of the noblest of all professions; one ideal, that of using our services wisely in the interest of that profession and proving ourselves true helpmates both individually and collectively.

We can function for good just so far as all members will share this responsibility, study our aims and ideals and accept work in organized groups. So let us grasp the opportunity which is ours with new courage, new interest and new enthusiasm, that the future welfare of the Auxiliary may be assured.

Happily anticipating our year of service together and asking for your energetic cooperation, I am,

Cordially yours,

Mrs. William A. Seidler, President,
Woman's Auxiliary,
Iowa State Medical Society.

THE STATE MEETING OF THE WOMAN'S AUXILIARY

By a Casual Observer

What a confusion on the mezzanine floor of the Fort Des Moines Hotel, the morning of May 10th! Doctors to the right of me, doctors to the left of me, grave old grey hairs, gay young blades; here a group discussing an interesting case, there one talking over the latest automobile and another with their heads together planning the politics of the convention.

Where is that registration desk for the Auxiliary? Ah, the quietest place on the floor with the women writing their names and receiving their little badges. Guess I'll go to the Board meeting, slip into a corner and hear what they are doing.

This seems a most friendly place. Everyone who enters, greets her fellow member with real warmth. The president, Mrs. McLaughlin, of Sioux City, has already taken the chair with her imposing brief case full of data and at her side pretty Mrs. Bond ready with her secretary's book to take the minutes. Who is the woman they all greet so cordially? Oh, yes, none other than Mrs. Bower of Guthrie Center, one of the enthusiastic members of long standing. And Mrs. Voldeng and Mrs. Channing Smith and—but the president calls the meeting to order. Ho hum! its warm in here and I guess the women know how to run their meeting so I'll take a stroll till lunch is over. They tell me the Board is to have their lunch together with no guests. I wonder what they discuss, pots, pans or politics.

Here I am at the afternoon meeting in the dining room. This ought to be more comfortable but who wants to hear greetings and responses! That response by Mrs. Beckman of Perry was great; I didn't know these women had such ability; she must be from the south from her dialect; I'll hunt her up and see where she lived in old Dixie. There's the "Ambassador," Dr. Harkness of Davenport, one of the members of the Board of Trustees. He claims to know very little about the Auxiliary but they all seem glad to see him.

Well, it was a nice meeting but I'm tired and I think I'll go home and not attend the medical meeting or go shopping or go for a drive, that's what some of the women are doing.

Evening and how the numbers have swollen for the card party! The room buzzes this time with card enthusiasts and a busy committee tries to get more tables and everyone is dressed up and having a grand time. I'd go home only they say there are to be awfully good eats. That prize committee certainly had good taste! Well at last the food and then good night till tomorrow morning's meeting. Now everyone is getting acquainted and that seems to be one of the main objects of this organization.

Thursday morning and so many have registered that they have run out of badges. This does not seem like a depression! This morning's meeting seems

like a big friendly family. Its nice of those busy doctors to give a little talk to the women. Dr. Boice, of Washington, gave just the right thought. Why don't the women get a copy of his talk? And Dr. Bowen, the president, how nice of him to take a moment to give a word of encouragement. I think the women will remember these two nice doctors. Those reports of the different county auxiliaries they sounded rather interesting but that little Mrs. Donahue, of Centerville, gave one that was good. I believe that county has them all beaten, for they are supplying a bed at their hospital. Well, whether its serious or fun it brings all those doctors' wives together and that should help their husbands.

My but these women are up-to-date. They have their slate all ready and the election is going off with a bang. Mrs. Downing is a good selection for president elect; she looks peppy and she's had a lot of club experience. Now they install the new president, Mrs. Seidler of Jamaica. She's a whizz, they say, and has some grand new ideas. Just watch things grow this year, and every woman is behind her. That ought to make the Auxiliary a success.

Now to the luncheon at Wakonda. I certainly hope they have a place for me, for they say there are more reservations for this luncheon than ever before. I'll trail some of these women through the exhibit room and get some samples. Its the most dolled up exhibit they have had for some time.

Every one and her "Sister Sue" is at the luncheon at Wakonda Club. This doesn't seem to be a gossipy crowd. Maybe doctors' wives have too much to interest them to have time for gossip. That was a good meal even if I did have to eat at the extra table. Now for the program. Mrs. McClean is charming in her Directoire costume singing her French chansons.

It's certainly been a grand meeting and thanks to Mrs. Burcham, president of the Polk Auxiliary and her efficient committees the whole thing has gone like clockwork. I hope they'll come back next year so I can report again.

The banquet Thursday is outside my assignment so I'll call it a day and sign off, but not before I say that I'm fully persuaded that the Auxiliary has a definite place in the life of a doctor's wife. They talked of loyalty, desire to help, sympathy, individual responsibility, tolerance, courtesy, willingness to learn, vision and many other fine subjects. If they live up to these ideals they will go a long way and grow as the years go by.

OFFICERS OF THE WOMAN'S AUXILIARY TO THE IOWA MEDICAL SOCIETY

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Parliamentarian, Mrs. Ralph H. Parker, Des Moines

Directors

Mrs. L. R. Woodward, one year, Mason City
Mrs. F. J. Swift, two years, Maquoketa

THE OPEN FORUM

THE FINLEY HOSPITAL CLINICOPATHOLOGIC CONFERENCES

We were very much interested in the outline of the programs of the Dickinson County Medical Society as published in the April Journal of the Iowa State Medical Society. We desire to call attention to the cases considered in The Finley Hospital Clinicopathologic Conferences since the beginning of the present hospital year. These conferences supplement the scientific meetings of the Dubuque County Medical Society and the Finley Hospital Staff, and are methods by which any group of medical men can continue postgraduate training. The conferences are similar to those in larger hospitals, are held each week and are open to all interested physicians. The cases demonstrated include living patients as well as expired ones. A brief clinical history is given; the roentgenologist and pathologist demonstrate their findings and the differential diagnosis is discussed by the members of the staff. In those cases which come to necropsy the pathologist demonstrates the gross and microscopic pathology and gives the anatomic diagnosis after the discussion on diagnosis. There is also a brief review of the literature concerning the condition under consideration. We have found this method to be of great value because each case presents practical medical problems. At times the problems are very puzzling but most of them can be solved by the combined efforts of those present. The unsolved cases tend to stimulate renewed efforts to obtain solutions of the particular problems presented. The necropsy reports are also very stimulating since they bring out certain deficiencies in diagnoses. Obviously the greater the number of necropsies the greater will be the stimulus to improved diagnoses. Since the beginning of the present year we have had twenty-four necropsies. We wonder how this compares with similar hospitals in Iowa. Following is a list of the cases which have been considered at the conferences during the past four months:

Clinical Cases

1. Postoperative Massive Collapse of the Lung, Dr. L. H. Fritz.

2. Ectopic Pregnancy, Dr. Roy I. Theisen.
3. Full Term Tubo-abdominal Pregnancy; Death of Fetus; Surgical Excision of Gestation Sac after Four Years; Recovery, Dr. C. E. Loizeaux.
4. Malignant Sacrococcygeal Tumor, Dr. L. H. Fritz.
5. Fibro-adenoma of Intestine Causing Intestinal Obstruction, Dr. F. P. McNamara.
6. Carcinoma of the Breast with Multiple Skin Metastases, Drs. L. H. Fritz and E. R. Young.
7. Carcinoma of a Bronchus, Drs. J. C. Painter and H. E. Thompson.
8. Malunion of Tibial Fractures with Outline of Treatment, Dr. D. C. Conzett.
9. Umbilical Fistula in a Woman of Twenty (Question of Meckel's Diverticulum), Drs. Wm. Schiele and L. H. Fritz.
10. Lymphoid Leukemia; Results of Three Years X-Ray Therapy, Drs. M. Killeen and H. H. Webb.
11. Prurigo in Children, Dr. C. C. Lytle.
12. Paget's Disease of the Tibiae, Dr. D. C. Conzett.
13. Idiopathic Inflammation of Tenon's Capsule, Dr. H. E. Thompson.
14. Dermatitis Due to Exposure to Sunlight, Dr. C. C. Lytle.
15. Cases of Dermographia and Dermatitis Multiformis, Dr. W. A. Henneger.
16. Renal Calculus, Dr. L. H. Fritz.
17. Multiple Cysts of Bursae About Right Knee, Dr. C. E. Loizeaux.
18. Acute Appendicitis Complicating Pregnancy, Dr. D. F. Ward.
19. Subungual Melanoma (Melanotic Whitlow), Dr. F. P. McNamara.
20. Hypertrophied Lingual Tonsils, Dr. A. B. Nesler.
21. Bilateral Parotitis Following Tonsillitis, Dr. A. B. Nesler.
22. Osteochondritis Dissecans of Knee, Dr. L. G. Ericksen.
23. Malnutrition in a Girl of Nineteen (Simmond's Disease?), Dr. A. B. Nesler.
24. Osteogenic Sarcoma of Femur, Dr. F. P. McNamara.
25. Agranulocytopenia, Dr. L. E. Cooley.
26. Treatment of Fractures of Tibia and Fibula, Dr. D. C. Conzett.
27. Aneurysm of the Aorta, Dr. H. H. Webb.

Necropsied Cases

1. Aortic and Mitral Endocarditis with Lobar Pneumonia, Dr. A. B. Nesler.
2. Fractured Hip; Thrombosis of Femoral Vein and Pulmonary Embolus, Dr. A. B. Nesler.
3. Infected Wound of Hand; Pulmonary Infarcts with Abscess Formation; Coronary Thrombosis, Dr. D. C. Conzett.
4. Syphilitic Meso-aortitis; Aneurysm of Innominate Artery; Canalized Thrombi of Right Subclavian, Right Internal Carotid and Left Common Carotid Arteries, Dr. L. E. Cooley.
5. Chronic Pachymeningitis Externa, Dr. E. R. Young.
6. Tuberculous Salpingitis and Peritonitis; Acute Appendicitis with Perforation; Generalized Peritonitis with Umbilical Fistula, Drs. Wm. Schiele and L. H. Fritz.
7. Aperture of Mesentery; Strangulation of Intestine and Gangrene, Drs. R. C. Sherman and L. H. Fritz.
8. Endothelioma of the Brain, Dr. H. B. Hibbe.
9. Perforation of the Colon (automobile accident), Dr. C. E. Loizeaux.
10. Coronary Sclerosis and Thrombosis; Infarction and Rupture of the Left Ventricle; Hemorrhage into Pericardial Sac, Dr. R. R. Harris.
11. Spongioblastoma of the Brain, Drs. H. E. Thompson and C. E. Loizeaux.
12. Subdural Hemorrhage in a Newborn Babe, Dr. H. M. Pahlas.
13. Traumatic Rupture of Duodenum and Retroperitoneal Cellulitis, Drs. R. R. Harris and H. M. Pahlas.
14. Necrotizing Lobar Pneumonia with Abscess Formation, Dr. W. Cary.
15. Chronic Cholecystitis and Cholelithiasis; Carcinoma of Gallbladder and Invasion of Liver; Jaundice, Dr. W. J. Connell.
16. Unresolved Pneumonia with Abscess Formation; Acute Fibrino-purulent Pericarditis, Dr. J. C. Kassmeyer.
17. Hypertrophied Prostate; Diverticulum of Bladder; Cystitis and Pyelonephritis, Drs. B. Michel and R. R. Harris.
18. Carcinoma of the Stomach, Dr. H. B. Hibbe.
19. Chronic Appendicitis; Acute and Chronic Cholecystitis; Postoperative Coronary Thrombosis, Dr. J. C. Hancock.
20. Influenzal Pneumonia, Dr. F. P. McNamara.
21. Lobar Pneumonia, Dr. F. P. McNamara.
22. Acute Hemorrhagic Pancreatitis; Fat Necrosis of Omentum; Peritonitis, Dr. W. A. Henneger.
23. Pulmonary Tuberculosis and Tuberculous Meningitis, Dr. W. Cary.

We take considerable pride in the above programs. They offer a liberal amount of postgraduate training to all who take an active part in the conferences. Can any 100 bed hospital in Iowa surpass it?

F. P. McNamara, M.D.,
Director of Clinicopathologic Conference.

SOCIETY PROCEEDINGS

Black Hawk County

C. W. Rutherford, M.D., of the State University of Iowa, was the speaker of the evening, Tuesday, May 16, when the Black Hawk County Medical Society met in Waterloo. Dr. Rutherford's topic was Squint, and his paper was discussed by Charles E. Chenoweth, M.D., of Mason City; W. W. Pearson, M.D., of Des Moines; and Fred W. Bailey, M.D., of Cedar Rapids. A paper on Appendicitis in Childhood was presented by C. L. Nelson, M.D., of Waterloo, and discussed by G. A. Bairnson, M.D., of Cedar Falls.

Cass County

The Cass County Medical Society met in regular session Tuesday, May 16, in Atlantic. H. E. Campbell, M.D., of Anita, presented a paper on External Injuries to the Abdominal Viscera, with a report of three cases. Dr. C. L. Campbell, of Atlantic, was informed that he had been granted a life membership in the Iowa State Medical Society. The presentation was particularly fitting at this time, as this year marks the fiftieth anniversary of Dr. Campbell's arrival for the practice of medicine in Cass county.

At the business meeting it was voted to combine the Audubon and Cass County Medical Societies for meeting purposes only. It was felt that their scientific programs would be more advantageously presented before a larger section, but for all other purposes the two societies will maintain their separate identity..

R. M. Sorensen, M.D., Secretary.

Chickasaw County

J. Carl Painter, M.D., of Dubuque, was the guest speaker of the Chickasaw County Medical Society, Friday, April 28, when that organization met in New Hampton. His subject was Childhood Types of Tuberculosis. Edward Nowak, M.D., of New Hampton, spoke on Eye Injuries.

Clinton County

Thursday, May 4, Stanley Gibson, M.D., of the department of pediatrics of the Northwestern University, Chicago, spoke before the Clinton County Medical Society at Clinton, on Nose and Throat Infections in Children.

Davis County

The Davis County Medical Society conducted a heart and lung clinic, Friday, April 28, at the Bloomfield Library. Following a six-thirty dinner, Elmer E. Kottke, M.D., of Des Moines, addressed the group on Some Guiding Rules in Diagnosis of Early Tuberculosis, and Daniel J. Glomset, M.D., also of Des Moines, spoke on The Hypertensive Heart.

Friday, May 26, members of the Davis County Medical Society met in Bloomfield at the office of Drs. Shelton and Fenton, and the following program was presented: Non-Tubercular Condition of the Chest, H. H. Webb, M.D., of Ottumwa; Bedside Practice, E. R. Newland, M.D., of Drakesville; and House of Delegates Report, H. C. Young, M.D., Bloomfield.

H. C. Young, M.D., Secretary.

Dubuque County

The regular monthly meeting of the Dubuque County Medical Society was held at Finley Hospital, Tuesday, May 9, and the scientific program was as follows: Obstetric and Gynecologic Tuberculosis, F. H. Falls, M.D., professor of obstetrics and gynecology, University of Illinois, Chicago; and Modern Concepts of Sinus Disease, Francis Lederer, M.D., professor of eye, ear, nose and throat, University of Illinois, Chicago.

Roy I. Theisen, M.D., Secretary.

Floyd County

Tuesday, April 25, the regular meeting of the Floyd County Medical Society was held at Charles City. O. H. Banton, M.D., of Charles City, presented an interesting paper on Indirect Injuries to the Neck, with a group of case reports. H. H. Kruse, M.D., of Rockford, gave an instructive address on Nephritis in Children. Both papers were followed by general discussion. The scientific program was concluded with two moving picture films demonstrating Colles' Fracture and The Anatomy of Abdominal Viscera.

J. B. Miner, Jr., M.D., Secretary.

Henry County

The Henry County Medical Society met Friday, April 21, and the two following papers were presented: Anemia, J. T. McConnaughy, M.D., of Mt. Pleasant; and Benefits of the Medical Society to Local Physicians, O. A. Geeseka, M.D., also of Mt. Pleasant.

Jasper County

O. L. Nols, professor of parasitoloty at the State University of Iowa, addressed the members of the Jasper County Medical Society at a dinner meeting, held Tuesday, May 2, at the Grand Hotel in Colfax. Professor Nols spoke on Trichinosis.

Linn County

As announced last month, Richard L. Sutton, M.D., of Kansas City, was the guest of the Linn County Medical Society, Thursday, May 18. He conducted a skin clinic in the afternoon, and after dinner addressed a group of three hundred and fifty physicians, wives, and guests, on his experiences in the Arctic region last summer.

The election at the business meeting resulted in Dr. H. J. Jones being named president of the society.

Dr. Ivan H. Sheeler of Fairfax was named vice president, and Dr. Thomas F. Hersch, and Dr. Emma J. Neal were re-elected secretary and treasurer, respectively. Dr. Thomas F. Suchomel and Dr. J. K. Von Lackum were elected delegates, and Dr. John Hamilton and Dr. Howard L. Van Winkle, were selected as alternate delegates.

T. F. Hersch, M.D., Secretary.

Marshall County

The Marshall County Medical Society met in regular session, Tuesday, May 2, at the Hotel Tallcorn, and Verl A. Ruth, M.D., of Des Moines, spoke before the society on Fractures of the Vertebrae.

Polk County

The regular monthly meeting of the Des Moines Academy of Medicine and Polk County Medical Society was held in the Pioneer Room of the Kirkwood Hotel, Tuesday evening, May 23, in Des Moines. Francis R. Holbrook, M.D., read a paper on Angina Pectoris, and Harry A. Collins, M.D., presented a paper on The Relationship of the Electrocardiograph to the Diagnosis and Prognosis of Angina Pectoris and Coronary Heart Disease. A motion picture entitled The Mechanism of the Heartbeat and Electrocardiography, an animated simultaneous showing of the heart action and its tracing on the electrocardiograph, was shown. The two papers were discussed by Drs. Walter L. Bierring, Martin I. Olsen, Walter D. Abbott, Daniel J. Glomset, and Addison C. Page. The program was an excellent presentation of the subject, and merited the many favorable comments of those in attendance.

President Parker extended the thanks of the Council and the Society to the Entertainment Committee and those who participated in their program at the smoker held during the recent annual session of the Iowa State Medical Society. He also announced that the June meeting would be omitted and that the next regular meeting of the society would be held in September.

Approximately 110 members and guests attended the meeting and many of them remained for a social hour.

L. K. Meredith, M.D., Secretary.

Pottawattamie County

Nearly seventy-five members of the Pottawattamie County Medical Society and physicians from surrounding counties, attended the meeting held at the Jennie Edmundson Memorial Hospital, Thursday, May 4. The scientific program was as follows: Addison's Disease, Harry A. Collins, M.D., of Des Moines; Odor and Taste in Drinking Water, J. F. Aldrich, M.D., of Shenandoah; Tularemia, Raymond Rice, M.D., of Council Bluffs; Appendicitis and Pregnancy, Fred Beaumont, M.D., of Council Bluffs. C. A. Hill, M.D., and Christine Ericksen-Hill, M.D., both of Council Bluffs, opened the discussion on the last paper.

Scott County

The Scott County Medical Society met Tuesday evening, May 2, in Davenport. Dinner was served promptly at six o'clock, after which the scientific program was furnished by Francis L. Foran, M.D., clinical assistant professor of medicine, Rush Medical College, Chicago, who spoke on Allergy.

H. A. Meyers, M.D., Secretary.

Tama County

M. G. Meyers, M.D., of Marshalltown, was the guest of the Tama County Medical Society, at the regular meeting held in Traer, Friday, April 21, speaking on Diabetes.

Woodbury County

Thursday, April 27, L. J. Frank, M.D., and Thomas F. Gittins, M.D., presented a symposium on Allergy before the Woodbury County Medical Society. Dr. Frank spoke on Allergy in Relation to Dermatology, and Dr. Gittins on Allergy in Relation to Otolaryngology.

J. C. Ohlmacher, M.D., pathologist at the University of South Dakota Medical School, Vermillion, was the speaker of the evening, Thursday, May 25, when the Woodbury County Medical Society met in regular session. Dr. Ohlmacher addressed the group on The Functional Basis of Certain Kidney Diseases, with a Brief Consideration of the More Common Kidney Lesions. Discussion of the paper was opened by A. C. Starry, M.D., pathologist at St. Joseph's Mercy Hospital in Sioux City.

Lawrence E. Pierson, M.D., Secretary.

Council Bluffs City Medical Society

Dr. Jack V. Treynor was elected president of the Council Bluffs City Medical Society, at a meeting held Saturday, May 6, in the Hotel Chieftain. Other officers are: Dr. J. L. Stech, vice president; Dr. Harriett Hamilton, secretary; and Dr. M. C. Hennessy, treasurer.

Eleventh District Medical Society

The Eleventh District Medical Society held a meeting, Wednesday, April 19, in Council Bluffs, at the Hotel Chieftain. A six-thirty dinner was served to all present, as a courtesy of the Council Bluffs Medical Society. Following the dinner, Prince E. Sawyer, M.D., of Sioux City, chairman of the professional relations committee of the Iowa State Medical Society, gave an address, and Carl Jordan, M.D., of Des Moines, state epidemiologist, made some remarks. A committee was appointed to confer with committees from the allied professions as to their relations with us. It was felt that the meeting was highly successful.

M. C. Hennessy, M.D., Councilor.

Tri-County Medical Society

The Tri-County Medical Society, composed of physicians from Henry, Jefferson and Washington counties, met in Washington, Tuesday, May 2. The following scientific program was presented: Appen-

dicitis, A. Keith Droz, M.D., of Washington; and Neurologic Points for the General Practitioner, M. L. McCreedy, M.D., of Brighton. C. A. Boice, M.D., of Washington, read a paper on Compound Fracture of the Tibia and Fibula, Treated by the Antiseptic Method, which had been prepared and read by J. D. Miles, M.D., of Crawfordsville, in September, 1874. This old paper proved very interesting.

W. S. Kyle, M.D., Secretary.
Washington County Medical Society.

INTERESTING NEWS

In Brief

Accidents of one sort or another injured one person out of every fourteen in the United States last year.

A new leprosy station in the Philippines has been named the Leonard Wood Memorial for the Eradication of Leprosy.

The number of diabetic patients throughout the world who are taking insulin is now thought to be over one million.

The world's largest microscope, seven feet high, is now being exhibited at the Chicago Century of Progess Exposition.

A twelve-year investigation concerning the inheritability of cancer conducted at Columbia University disproves this etiology of malignant disease.

The Rose Cross Free Medical and Surgical Clinic in Sioux City administered 755 treatments during April to 48 new patients and 111 old patients.

A recent investigation in Germany indicates that some form of heart disease is responsible for more than one-third of all deaths occurring among locomotive engineers.

Fewer children are being killed by automobiles now than at any time in the last ten years, according to statistics compiled by the Metropolitan Life Insurance Company.

The North Carolina physicians conclude from a very extensive study into the family history of patients suffering from hypertension that this condition is a familial one.

The discovery of a new sex stimulating pituitary hormone has just been announced by Dr. Herbert M. Evans of the Rockefeller Institute. The new hormone has not yet been biologically studied.

The new Veteran's Administration Hospital in Des Moines will receive its professional staff some time in June, and will likely receive patients early in July. The hospital capacity is 300 beds.

Observations conducted at the Mayo Clinic on animals indicate that the liver has rhythm, pulsating on the average of two beats per day. The significance of this observation is not yet apparent.

The largest single outbreak of malta fever ever to occur in Iowa has been recently reported from Council Bluffs where something over twenty cases have been reported to the health authorities.

The American Chemical Society has formally petitioned the government to issue a United States postage stamp commemorating the bicentennial anniversary of the birth of Joseph Priestley, discoverer of oxygen.

Commemorating National Child's Health Day the Auxiliary of the American Legion at Anamosa sponsored a Child Health Clinic emphasizing the examination of healthy children for early or unrecognized defects.

To cut the cost of the artificially produced malarial infection treatment of paresis, the United States Public Health Service now ships salivary glands removed from infected mosquitos in bottles containing a suitable blood heating.

In the April issue of this Journal, the formation of the O'Brien County Inter-Professional Association was reported. During the past month professional men and women in Sioux County have organized for the purpose of educating the public in medical and health matters. The membership in each association is composed of doctors, dentists, nurses, veterinarians and druggists.

PERSONAL MENTION

Dr. W. E. Long, of Mason City, addressed the Clarion Rotary Club, Monday, May 1, on "Focal Infections—Red Lights in Human Pathology."

Dr. H. H. Webb, who for the past two years has been practicing at Dubuque, moved recently to Ottumwa, where he is limiting his practice to radium therapy and x-ray diagnosis.

Dr. Phillip C. Jeans, professor of pediatrics at the State University of Iowa, was a guest speaker at the annual session of the Kansas State Medical Society, held at Lawrence, Kansas. Dr. Jeans' topic was "Some Practical Aspects of Proper Nutrition in Childhood."

Dr. Henry Braunlich, of Davenport, has completed a half century of practice in that city, and is believed to be the oldest practicing physician in Scott county. He is a life member of the Scott County and the Iowa State Medical Societies.

Dr. M. E. Barnes, of Iowa City, addressed the local Kiwanis Club, Monday, May 8, on "Making the World Safe for Children."

Dr. James F. Edwards, head of the Iowa State College Hospital at Ames, was elected president of the American Student Health Association for the district including Iowa, Minnesota and Wisconsin, at the annual meeting of that organization held in Minneapolis, May 6 and 7.

Dr. Walter L. Bierring of Des Moines was the principal speaker at the First Unitarian Church, Sunday, May 14, when that church, in common with Unitarian churches in all parts of America, celebrated the two hundredth anniversary of the birth of Joseph Priestley, discoverer of oxygen, and founder of the Unitarian Church. Dr. Bierring's subject was "The Place Joseph Priestley Holds in Science."

Dr. Jean Jongewaard, who for the past five years has been located in Kansas City, has arrived in Jefferson to be associated in practice with her brother, Dr. Albert J. Jongewaard. Prior to locating in Kansas City, Dr. Jean Jongewaard had been campus physician at the Iowa State College in Ames.

Dr. W. B. Lewis of Webster City, spoke before the Webster City Kiwanis Club, Thursday, May 4, on the early use of anesthetics and the rapid advance of surgery through the use of anesthesia.

Dr. Lee Forrest Hill of Des Moines, appeared before the East Side Well Baby Clinic at its anniversary meeting, Friday, May 5, speaking on "What a Child Expects of Its Parents."

Dr. J. B. Naftzger has returned to his home in Sioux City, after a five months' vacation in Palm Springs, California. He will resume his practice with Drs. T. R. Gittins and J. E. Dvorak.

Dr. Ben C. Hamilton, Jr., of Jefferson, spoke before the Nursing Activities Committee of the Red Cross, Saturday, May 6, on "Prenatal Care."

Dr. Nelson L. Hersey, who recently located in Cedar Falls, has announced his association with Drs. A. G. Shellito and Fred F. Agnew, in Independence.

Dr. W. A. Rohlf of Waverly, Spoke on "Cancer and Its Treatment," at a meeting sponsored by the Business and Professional Women's Club of Sumner, at Sumner, Monday, May 1.

Dr. J. J. Buchanan, a recent graduate of the University of Indiana College of Medicine, will locate in Milford, where he will be associated with Dr. C. M. Coldren. Dr. Buchanan comes directly from La Crosse, Wisconsin, having just completed his internship in the St. Francis Hospital.

Dr. John E. Stansbury of Cedar Rapids, discussed the need for a sterilization law to take care of selective mental defective cases, at a meeting of the Cedar Rapids Rotary Club, Monday, May 15.

Drs. T. A. Burke of Mason City, **S. S. Westly** of Manly, and **P. E. Keeffe** of Sioux City, are among Iowa physicians planning to attend European assemblies of the Interstate Postgraduate Medical Association of North America.

DEATH NOTICES

Davenport, Frank Douglas, of Winterset, aged sixty-nine, died May 22 of angina pectoris. He was graduated in 1887 from the Eclectic Medical College, Cincinnati, and at the time of his death was a member of the Madison County Medical Society.

Dietz, Charles Frederick, of Neola, aged sixty-eight, died April 21, after an extended illness. He was graduated in 1897 from the University of Nebraska College of Medicine, and had long been a member of the Pottawattamie County Medical Society.

Hinkle, George Wesley, of Harvard, aged eighty-three, died suddenly May 13. He was graduated in 1875 from the College of Physicians and Surgeons, Keokuk, and at the time of his death was a life member of the Wayne County and Iowa State Medical Societies.

McCray, Walter R., of Charles City, aged fifty-eight, died May 15 as the result of uremia following the removal of a kidney. He was graduated in 1900 from the University of Illinois College of Medicine and at the time of his death was a member of the Floyd County Medical Society.

RESOLUTIONS

MANNING L. ALLEN, M.D.
1863-1933

Whereas, the silent reaper has again entered our circle and removed from our midst Dr. Manning L. Allen, beloved by our fraternity, his numerous friends and sorrowing family, we accept in humble submission the dictates of an all-wise providence.

As a family physician of the old school and profound student of modern medicine he was ever ready to give of his best in promoting the activities and interest of his society and the welfare of his numerous patients. His place will be hard to fill, not only in his medical society, but in the community where he had given nearly fifty years of service and sacrifice.

Therefore, be it resolved, that the Tama County Medical Society has lost one of its charter members and earnest supporters, his family a kind and loving husband and father, and the community a friend and counselor, who responded to every noble activity that needed cooperation and encouragement.

Be it further resolved that a copy of these resolutions be sent to the family, that the resolutions be spread on the minutes of the society and a copy sent to THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY.

A. A. Pace
B. F. McNeil
A. J. Farnham.

History of Medicine in Iowa

Edited by the Historical Committee

Dr. Henry B. Young, Burlington
Dr. Frank M. Fuller, Keokuk
Dr. Tom. B. Throckmorton, Des Moines
Dr. Walter L. Bierring, Des Moines
Dr. John T. McClintock, Iowa City

The History of Medicine in Lucas County

Tom Morford Throckmorton, A.M., M.D.,
Chariton

Tom Bentley Throckmorton, B.Sc., M.D.,
Des Moines

(Continued from last month)

PHYSICIANS WHO HAVE PRACTICED IN CHARITON

Dr. William Henry Gibbon

Dr. William Henry Gibbon was born at Ellicotts Mills, Maryland, January 31, 1832. He was the son of Mason Seeley Gibbon and Mary Marr (Brooks) Gibbon. Following the death of his father, the mother and children moved to Salem, New Jersey, where young William attended the Salem Academy and schools in Philadelphia. At eighteen years of age he became a clerk in a dry goods store and worked for three years in that capacity. He then began reading medicine under the preceptorship of his uncle, Dr. Quinton Gibbon, of Salem, New Jersey. He continued in his uncle's office and attended medical lectures until 1857, when he was graduated from the Jefferson Medical College of Philadelphia.

In 1858 he became a resident of Chariton, where he accepted a position, for a time, in the general merchandising store owned by his uncle, E. K. Gibbon. On September 4, 1861, he was married to Miss Laura R. Gibbon, of Beaver Dam, Wisconsin. They had one daughter, Anna.

Dr. Gibbon accepted a commission as Assistant Surgeon in the Fifteenth Iowa Infantry, November 2, 1861, and was promoted to the rank of full surgeon early in 1862. He served and followed his country's flag through the Civil War, and received an honorable discharge from the army after the close of hostile activities. On his return home, he became the proprietor of a drug store. He was skillful and dexterous in amputations and gave much of his attention to operative surgery. He was also a congenial and interesting talker. The doctor built a fine brick business block for his drug store on the northeast corner of the town square, and later erected a large, fine residence, which at that time was among the best in the town. Here he died in his sixty-third year, October 2, 1895. His body was buried in the family lot in the Chariton cemetery.



William Henry Gibbon, M.D.
1832-1895

The writer recalls a story which Dr. Gibbon once related to him. Following the Civil War, typhoid fever made its appearance throughout the rural as well as the urban districts. The homecoming soldier, ill with the disease, spread the infection near and far. Consequently, one of the

principal diseases the physician of that day had to treat was enteric fever. The disease was endemic as well as epidemic in its activity. Thus, on one occasion, Gibbon was called in consultation to see a patient ill with typhoid fever. The man had been sick for three or four weeks. He was very toxic and weak, and his abdomen was greatly distended. The relatives and friends of the patient were considerably worried about the abdominal distention as well as about the fact that no movement of the bowels had occurred for a week or ten days. Sensing the feeling of the family and friends, the consultant rather stressed the point that probably many of the symptoms were toxic in nature and due to the lack of alimentary elimination. The attending physician readily acquiesed in the suggestion that elimination be secured and asked what drug should be used to produce the result. Gibbon suggested oleum tiglii and, in deference to the attending physician, asked what dose he would give of the drug. "Sixteen drops," replied the physician. The consultant, realizing the enormity of the suggested dose, diplomatically replied that he thought the amount a little too much and compromised on an eight drop dose. Accordingly, the croton oil was given; the consultant collected his fee, and the consultation was at an end. Time slipped by and the incident was forgotten, until months later when the two physicians happened to meet. "By the way," asked Gibbon, "how did our patient with the typhoid fever get along?"

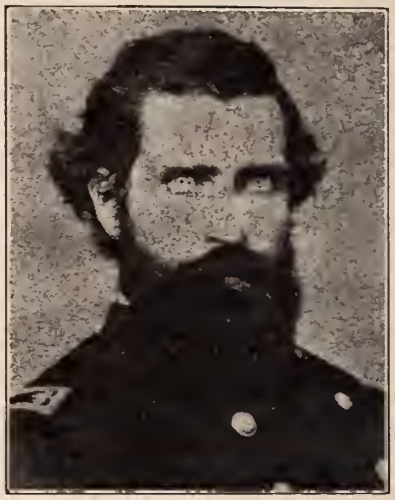
"Oh, he died the night you saw him," replied the former attending physician.

"Is that true?" replied Gibbon, adding, "By the way, did his bowels move?"

"Yes," was the prompt reply, "once before he died, and six times afterwards."

Dr. Joseph R. Jay

Dr. Joseph R. Jay was born in Indiana, January 8, 1837. On coming to Iowa he first located in Jefferson County. Later he came to Chariton, in either 1859 or 1860. Just what preliminary education he had in a medical way is unknown to the writer, except that he had attended the Rush Medical College in Chicago. Suffice it to say, Dr. Jay came to the prairies of Iowa and hung out his shingle as a practitioner of medicine. I well recall the doctor during my boyhood days. When the call to arms came in the early sixties, many families in the locality were left without a paternal head and many responsibilities fell upon the "war widows." It was to these persons especially that Dr. Jay was most kind and considerate. He vaccinated the families of soldiers free of charge, thus



Joseph R. Jay, M.D.
1837-1866

showing his willingness to aid in the prevention of that dread scourge, smallpox. He came to my father's home in December, 1862, where he vaccinated six of the children, all of whom soon had a sore arm to show for his personal skill and loving kindness. He requested my mother to save the first scabs as he told her that he could make use of those obtained from healthy children in vaccinating others.

In the fall of 1864, some time after my father was discharged from the army on account of disability, I was sent on horseback a distance of twelve miles to summon Dr. Jay to the bedside of a tenant who was working for my father. The good doctor pronounced the illness due to typhoid fever and left the nursing care to my father. One day, after the doctor had made several visits and had watched with interest the progress of the patient, he said to my father:

"Throckmorton, come to Chariton and enter my office and read medicine with me. I will not charge you a cent. You have the education, ability and tact, and you will make a good doctor. You are a good nurse. I will give you free access to all my books and will show you how to prepare my medicines. I will tell you all I know. In three months time you will be a first class doctor, and then I will take you in as a partner.

"Later, if you care to, you can go to Keokuk to Dr. J. C. Hughes' Medical School. It only costs about twenty-five dollars a term of twelve weeks and a ten dollar additional fee, if you graduate. Think this over carefully."

I write of this instance merely to show how easily doctors were made in the early pioneer days. Needless to state, my father did not accept the good doctor's advice.

Dr. Jay was married to Miss Lucy Collins, at

Fairfield, Iowa. She was a native of Ohio, having come to Jefferson County with the Collins family in the early fifties. She was a sister of Dr. David Y. Collins. Dr. and Mrs. Jay had three children; a son, Kasson, who died at an early age, and two daughters, Elizabeth and Minnie, who are now living in Chicago. Elizabeth married Dr. William C. Davis, a son of Dr. C. W. Davis, of Indianola, Iowa, who was the regimental surgeon of the 34th Iowa Volunteer Infantry in the Civil War. Mrs. Jay died in Chicago about three or four years ago.

The doctor was not a strong man, physically. It was for this reason, perhaps, that he did not enlist early in the Civil War. He was commissioned as Assistant Surgeon in the 34th Iowa Infantry, January 28, 1864, and was mustered into the United States service as such. He died of tuberculosis at his home in Chariton, July 28, 1866, when a little past twenty-nine years of age. His body was interred in the Chariton cemetery.

Dr. Henry W. Jay

Dr. Henry W. Jay, an elder brother of Joseph R. Jay, likewise, a native of the Hoosier state, was born August 17, 1834. He preceded his brother to Iowa, and eventually located in Chariton in 1860. He was married to Miss Mary Riser, and to this union was born one son, Charley. Both wife and son have long since passed away.

In the stirring times attending the Civil War, the doctor responded to the call of his country. He joined the colors September 16, 1862, and was commissioned as Assistant Surgeon of Company E, 34th Iowa Volunteer Infantry. He was mustered out of service in Arkansas, February 2, 1863. Dr. Henry Jay, like his brother, Joseph, was never a strong or robust man. Apparently tuberculosis was the cause of most of his physical ailments. He died at his home in Chariton, December 18, 1868, at the age of thirty-four years and was buried in the Chariton cemetery.

The writer recalls vividly an incident which occurred in the fall of 1864. Obediah Brown, a tenant on my father's farm, was unfortunate enough to get his hand crushed in a cane mill. Dr. Jay, who was summoned from Chariton to care for the injured one, decided that amputation was necessary. Accordingly he removed three fingers and part of the hand. Dr. Milton Campbell, one of Dr. Jay's students gave the chloroform on a handkerchief. In witnessing the operation through the open door of the log house, I had my first experience with the unpleasantness attending such a procedure. The smell of chloroform, the sight of blood, the sawing of bone, and the struggles and groans of the injured man, brought about a reaction almost universally common to those who, for the first time, are placed in a similar position. However, the experience proved a blessing in disguise, for later, when I attended my first course of medical lectures, the witnessing of surgical procedures brought about no sickness or faintness, so common to the first year medical student.

Dr. James D. Wright

Dr. James D. Wright was born in Belmont, Belmont County, Ohio, November 30, 1820. His grandfather came from Dublin, Ireland, in 1802, and entered, with others, a section of land where the town of Belmont, Ohio, now stands. His mother's ancestors came from England to Maryland with Lord Baltimore, and thence westward to Ohio. As a lad, young James walked three miles to school in the wintertime, learning his



James D. Wright, M.D.
1820-1905

a b c's from crude letters pasted on a paddle. The schoolhouse was built of hewn logs and the children sat on benches made of slabs. When he was sixteen years of age, young James teamed across the mountains along the government pike to Baltimore. Later he left home and attended school at Monroe Academy in Woodfield for about three years. At the end of that time he decided to study medicine and went to Cincinnati, Ohio, where he entered the Medical Department of the University. He was graduated from this institution in the class of 1845. Dr. Wright then went to New York City. The journey at that time was attended with many difficulties. The first part of the trip was made by steamboat on the Ohio river, and by stagecoach across the state from Wheeling to Cleveland. Here the journey was continued

by boat to Montreal and thence down the Hudson river to the great city at its mouth. At that time there were no railroad facilities, no telegraph, and no telephone. After reaching New York City, Dr. Wright entered the College of Physicians and Surgeons and received his doctor's degree in the class of 1846.

The young physician, doubly qualified by graduations, then returned to his native town in Ohio to practice. Here he rode on horseback, far and wide, throughout the length and breadth of the surrounding country, enduring the hardships and privations common to the physician in the pioneer days. On March 3, 1847, he was married to Miss Margaret Ann Evans. He joined the Odd Fellows organization in 1852. He took an active part in the building of the Baltimore and Ohio railroad when that road was built through Ohio.

In 1853, owing to poor health he and his wife visited several of the western states. They traveled over Indiana, Illinois and Iowa as far as Council Bluffs, where, after waiting three days for the wind to stop blowing, so that the Missouri river could be crossed to Omaha, they became disheartened and turned back for home. However, the doctor was evidently impressed by his western trip, for in the fall of 1856 he returned to Iowa and located in Knoxville, Marion County. That he did not continue farther westward may have been due to the advice he received that "beyond the Des Moines river lies the great American desert, where the land is of little value except in strips near the streams." The winters of 1856 and 1857 were extremely rigorous and the settlers encountered and endured many hardships. While in Knoxville, Dr. Wright took an active part in organizing the County Fair Association. He became identified with the State Board of Agriculture, and was one of its directors for eleven years.

In 1861 he moved to Chariton, and purchased a flour mill. With the breaking out of the Civil War he offered his services to Governor Kirkwood as a surgeon in the army. However, since he was unable to find anyone who could run the mill, he decided that he could do more good by staying at home and running the mill, thus helping the families of the soldiers who were at the front. This was a wise decision as there was no other grist mill within twenty-five miles of the town. The writer well remembers taking his handsled and going to Dr. Wright's mill in the winters of 1862 and 1863 to get cornmeal, buckwheat and rye flour for family use, as well as bran and shorts for the cow. The doctor was very kind to the families of the soldiers, trusting them for supplies obtained at his mill, and selling them sorghum molasses for much less money than they could purchase it from the stores. In 1864, Dr. Wright enlisted as a private in the 46th Iowa Infantry. He was soon made a surgeon of the 47th Iowa Infantry in which capacity he served until his regiment was mustered out of the service. He was elected to the state senate from the fifth senatorial district in 1867, and served in the twelfth and thirteenth general assemblies. He was elected a trustee of the State College of Agriculture at Ames, and served during the building and organization of that school. He was also associated with the early history of the Burlington railroad, and had a part in the building of that road across Iowa. The doctor did not enter active practice in Chariton, but counseled with the members of the profession on difficult cases. He was ever ready and willing to give aid and help to the younger men in the medical fraternity.

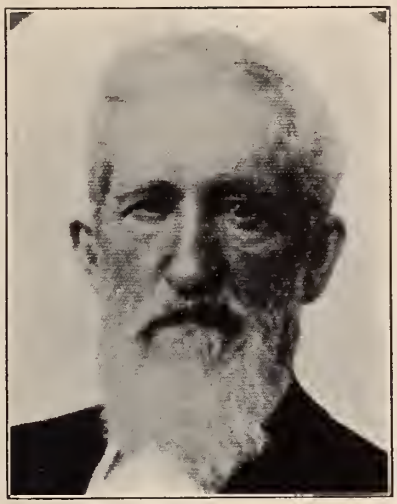
Dr. Wright died at the home of his son, Jenk E. Wright, in Chariton, December 26, 1905, at the ripe age of eighty-five years and he was buried in the Chariton cemetery with due military honors.

Dr. Milton Campbell

Dr. Milton Campbell located in Chariton in 1863. There is no record of his qualifications, nativity, medical school (if he attended any) or when he came to, or left, Lucas County. According to the Medical and Surgical Directory of Iowa by Charles H. Lathrop, M.D., 1876, the doctor was for a time located in Newbern, Marion County, a small inland town just over the north line of Lucas County. The personal recollection of Dr. Campbell by the writer is vivid, as already given in the account of his assisting Dr. Henry Jay, when the latter amputated a crushed hand in 1864.

Dr. James Eddington Stanton

Dr. James Eddington Stanton was born in Belmont County, Ohio, May 15, 1828. His parents were Enoch and Mary (Steel) Stanton, both natives of North Carolina. As a boy, James attended the common schools in Ohio. At the age of twenty-four years, he began the practice of medicine in his home community. Four years later he moved to Indiana, where he continued his professional activities until 1863, when he turned his steps westward and located in Chariton. In 1872 he was the recipient of the honorary degree of Doctor of Medicine from the College of Physicians and Surgeons at Keokuk. He was married November 14, 1850, at Sumerton, Belmont County, Ohio, to Miss Mary J. Hobbs, of Maryland, whose parents were of German de-



James Eddington Stanton, M.D.
1828-1908



Theodore Parker Stanton, M.D.
1853-1922

scent. The children born to this union were Minnie, Dr. Theodore Parker, Allie, Ruthanna, and Dr. John Henry.

The doctor was a member of Chariton Lodge No. 63 A. F. and A. M., Chariton Chapter No. 22 R. A. M., and Emanuel Commandery No. 50 K. T. He also belonged to the Des Moines Consistory and the Mystic Shrine. Dr. Stanton died in Chariton, November 6, 1908, at the advanced age of eighty years and his body was interred in the Chariton cemetery.

Dr. Theodore Parker Stanton

Dr. Theodore Parker Stanton was born in Ohio, September 26, 1853. He was the son of James E. and Mary J. (Hobbs) Stanton. His mother was a native of Maryland. He came with his parents from Indiana to Chariton in 1863, where his father engaged in the practice of medicine.

Young Theodore attended the public schools in Chariton, and grew up with the town. He was employed by David Quincy Storie in the latter's drug store for five years. He then entered Rush Medical College in Chicago, from which he was graduated in the class of 1879. Returning to his home town he entered into partnership with Dr. James E. Stanton, his father, and Dr. John W. Culley, who were associated together as Drs. Stanton and Culley. In a few years he assumed the leadership of the firm.

Dr. Stanton was married to Miss Hellen Marcy of Fairfield, Iowa, November 28, 1894. Two daughters and three sons came into their home; Mrs. Robert E. Larimer, Mrs. H. E. Leonard and Edwin M. Stanton, D.D.S., all of Chariton; Lucian M. Stanton, D.D.S., of Newton, Jasper County, Iowa, and James T. Stanton, M.D. All three sons are graduates of the State University of Iowa. Dr. James received his degree in the Medical Department in the class of 1930 and is now located in Mount Ayr, Ringgold County, Iowa.

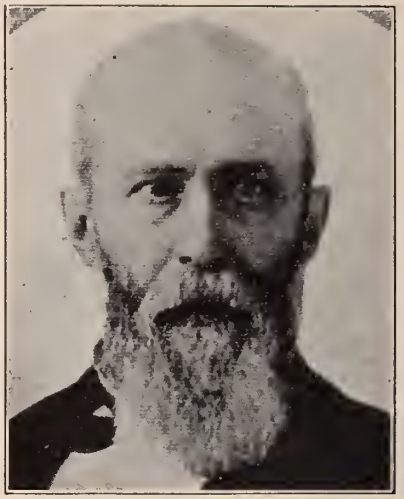
Dr. "T. P.", as he was commonly called by his friends, was a member of the Masonic fraternity, Commandery and Shrine. He was also a member of the Independent Order of Odd Fellows No. 64, at Chariton. For many years he was local surgeon for the Burlington railroad, and coroner of Lucas County, filling these positions at the time of his death. His demise occurred suddenly at his home October 26, 1922, at the age of sixty-nine years. His brother physicians acted as pallbearers at his funeral. The last sad rites over his remains were in charge of the Masonic Order and interment was in the family lot in the Chariton cemetery.

Dr. John Henry Stanton

Dr. John Henry Stanton was born in Spearsville, Brown County, Indiana, April 24, 1860. He was a son of Dr. James E. and Mary J. (Hobbs) Stanton, and came to Chariton with his parents in 1863. As a boy he acquired his education in the city schools. He was afterwards employed in a drug store owned by David Q. Storie. After several years of association with Mr. Storie, he began the study of medicine under the preceptorship of his father and older brother, Theodore. Entering Rush Medical College at Chicago, he received his medical degree in 1892. Following his graduation he was associated with his father and brother for a year or two, and then opened up an office for himself in Chariton. Dr. John built up a large practice, especially that of country work. In the opinion of the writer he was the



John Henry Stanton, M.D.
1860-1922



John Alexander McKlveen, M.D.
1835-1916

most skillful anesthetist in the administration of chloroform or ether, that ever located in the county. At that time these two drugs were the outstanding anesthetics in use. The doctor was careful, took plenty of time to bring the patient under, and most vigorously objected to being hurried. When the patient reached the border line where complete sensation to pain and muscular action ceased, Dr. Stanton seemed to possess a canny instinct as to the amount of anesthetic necessary to hold the patient in that state until the end of the operation. His unusual skill in administering anesthetics was revealed by the small amount of the drug he used, and the fact that vomiting, if present, was reduced to a minimum.

Dr. Stanton was married to Miss Gertrude E. Aughy, of Brown County, Indiana, June 30, 1894. He was a prominent member of the Masonic fraternity, reaching the 32 degree. He died suddenly at his home, May 26, 1922, his wife and four daughters surviving him. Interment was in the Chariton cemetery.

Dr. John Alexander McKlveen

Dr. John Alexander McKlveen was born in Westmoreland County, Pennsylvania, November 28, 1835. His parents were Henry and Catherine (Lohr) McKlveen; his father being of Scotch-Irish ancestry and his mother of German lineage. John was the oldest of fourteen children and was educated in the public schools of his native county. He taught school, and then took up the study of medicine with Dr. James Loar, of Mt. Pleasant, Pennsylvania.

In 1860 he attended his first course of lectures at the Physio-Medical College of Cincinnati, Ohio. He located first in Pleasant Unity, Pennsylvania. Two years later he moved to Centerville, Ohio, where he remained only a few months. He then settled in La Porte County, Indiana, for one year. He spent the winter of 1864-1865 in Illinois, after which time he came to Lucas County in June, 1865, and located in Chariton where he lived until the time of his death. In 1872 he attended a course of lectures at the Bennett College of Eclectic Medicine and Surgery in Chicago, from which institution he received his medical diploma.

Dr. McKlveen was the local surgeon for the Burlington railroad for several years. He was president of the Iowa State Eclectic Medical Society in 1875-1876, again in 1895, and again in 1904. As a member of the Iowa State Board of Health and Medical Examiners, he served faithfully and well for seven years. For some years he was a member of the Board of Examining Surgeons for Pensions. He also served as state senator from Wayne and Lucas Counties in the thirty-second general assembly. He was president of the State Savings Bank of Chariton, for many years. On November 10, 1868, in Freeport, Pennsylvania, he was married to Miss Kate M. Kennedy. To this union three children were born; Harry Bennett, Mary Elizabeth and Jessie. The wife and daughter, Elizabeth, died many years ago. The doctor afterwards was married to Miss Mary Genevieve Milthorpe, of Chariton, October 30, 1899.

Dr. McKlveen died at his home July 16, 1916, at the age of eighty-one years and burial was in the Chariton cemetery.

Dr. Harry Bennett McKlveen

Dr. Harry Bennett McKlveen, born December 17, 1869, was the son of Dr. John A. and Catherine M. (Kennedy) McKlveen. He was educated at the State University of Iowa; studied medicine under his father; and was graduated from the College of Physicians and Surgeons of Chicago, in the class of 1892. He then became associated



Harry Bennett McKlveen, M.D.
1869-1914

with his father for four years, after which he located in Coin, Page County, Iowa. He was married to Miss Lillian DeKalb, a daughter of Dr. B. D. DeKalb, of DeKalb, Decatur County, Iowa, and they had one child, a daughter. The doctor died suddenly in California in 1914. His body was returned for burial in the family lot in the Chariton cemetery.

Dr. George D. Dresser

Dr. George D. Dresser was practicing medicine in Chariton in 1876. He was a graduate of the Homeopathic Medical College, New York City, in the class of 1874. For information concerning this gentleman the writer is indebted to an old friend, who related that the doctor was associated for a time with Dr. William Wilson, the first homeopathic physician to locate in Lucas County. We have no further record of Dr. Dresser's activities.

Dr. William J. Baird

Dr. William J. Baird was born in Portage County, Ohio, April 16, 1832. He came to Iowa in October, 1853, and was located at Columbia, Marion County, prior to his coming to Chariton, about 1869 or 1870. He was made a Mason in Tyre Lodge No. 185, at Columbia. He was associated for a time with Dr. Harmon Heed, under the name of Drs. Heed and Baird. We have no record of where he received his medical education, or when he left Chariton, or where he may have relocated.

Dr. William H. Axline

Dr. William H. Axline came to Lucas County and located in Chariton, about 1874 or 1875. He was a graduate of the College of Physicians and Surgeons at Keokuk, in the class of 1869. For a time he was a member of the Chariton Board of United States Examiners for Pensions. In the spring of 1877, he sold his property and good will to Dr. Thomas J. Simmons, who succeeded him. The doctor was in Harlan, Shelby County, in 1886 and 1887. The last record we have of him shows that he was located in Attica, Marion County, in 1904.

Dr. Thomas J. Simmons

Dr. Thomas J. Simmons was born in Pennsylvania in 1838, and came to Iowa in 1864. He had acquired a good education, and had attended a course of medical lectures. He first located in Appanoose County. Some years later he moved to Wayne County where he had a large practice. Feeling the need of rest and a desire for more medical knowledge, he took his wife and two children to Philadelphia, in the fall of 1874. He was graduated from the Jefferson Medical College in the class of 1875, returned to Iowa, and re-entered the practice of medicine, this time locating at Promise City, Wayne County.

In the early spring of 1877, he located in Chariton. He purchased from Dr. William Axline, his good will and office equipment, and soon acquired a large practice. He was a good diagnostician and was especially successful in the treatment of disease. He was a large, tall man of commanding appearance, kind, friendly, and easy to approach. In 1866 he married Miss E. J. Martin, a daughter of an early day merchant of Centerville, Iowa. Three children came to gladden their household: Charles, Lura and DeLaskie. The doctor died suddenly in his office in the fall of 1889. He was buried in the Chariton cemetery.

(To be continued next month)

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

CHARACTER IN HUMAN RELATIONS—By Hugh Hartshorne, Ph.D., Columbia University, Research Associate in Religion, Yale University. Charles Scribner's Sons, New York and London, 1932. Price, $2.50.

DIETETICS FOR THE CLINICIAN—By Milton Arlanden Bridges, B.S., M.D., F.A.C.P., Associate in Medicine at the New York Postgraduate Medical School, Columbia University, in collaboration with Ruth Lothrop Gallup, dietitian, and a foreword by Herman O. Mosenthal, A.B., M.D., Director of Medicine at the New York Postgraduate Medical School, Columbia University. Octavo, 666 pages, price, cloth, $6.50. Lea & Febiger, Philadelphia, 1933.

DIET IN SINUS INFECTIONS AND COLDS—By Egon V. Ullmann, M.D., formerly special lecturer for biology at the Oregon State College. Recipes and Menus by Elza Mez. The Macmillan Company, New York, 1933. Price, $2.00.

THE ELEMENTS OF MEDICAL TREATMENT—By Robert Hutchison, M.D., F.R.C.P., physician to the London Hospital and to the Hospital for Sick Children. Second Edition, William Wood and Company, Baltimore, 1933. Price, $2.00.

GASTRIC ANACIDITY—Its Relations to Disease by Arthur L. Bloomfield, M.D., professor of medicine, Stanford University, San Francisco, and W. Scott Polland, M.D., instructor in medicine, Stanford University, San Francisco. The Macmillan Company, New York, 1933. Price, $2.50.

MEDICAL CLINICS OF NORTH AMERICA—(Issued serially one number every other month.) Volume xvi, No. 5. (Baltimore Number, March, 1933). Octavo of 257 pages with sixteen illustrations. Per clinic year, July, 1932, to May, 1933. W. B. Saunders Company, Philadelphia and London. Price, paper, $12.00; cloth, $16.00.

MEDICAL STATE BOARD EXAMINATIONS, an organized review of actual questions given in medical licensing examinations throughout the United States. By Harold Rypins, A.B., M.D., Secretary, New York State Board of Medical Examiners. J. B. Lippincott Company, Philadelphia, Montreal and London, 1933. Price, $4.50.

OBSTETRICS AND GYNECOLOGY, Volume I, by eighty leading specialists. Edited by Arthur Hale Curtis, M.D., Professor and Head of the Department of Obstetrics and Gynecology, Northwestern University Medical School, Chief of the Gynecologic Service, Passavant Memorial Hospital, Chicago, Illinois. Complete in three volumes and separate desk index. 3500 pages with 1664 illustrations, many in color. W. B. Saunders Company, Philadelphia and London, 1933. Price, per set, $35.00.

OPERATIVE SURGERY, VOLUME VII—By Warren Stone Bickham, M.D., and Phar.M. (Tulane), M.D., (Columbia), F.A.C.S., Former Surgeon in charge of General Surgery, Manhattan State Hospital, New York; and Calvin Mason Smyth, Jr., B.S., M.D., F.A.C.S., Assistant Professor of Surgery, Graduate School of Medicine, University of Pennsylvania. Includes general index to complete work, volumes i to vii, 849 pages with 765 illustrations. W. B. Saunders Company, Philadelphia and London, 1933. Price, cloth, $10.00.

SENILE CATARACT—METHODS OF OPERATING—By W. A. Fisher, M.D., F.A.C.S., Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College, formerly Professor of Clinical Ophthalmology, University of Illinois. 267 pages, 183 illustrations, 112 of which are colored. Published by the Chicago Eye, Ear, Nose and Throat College, Chicago, Illinois.

SURGICAL PATHOLOGY—By William Boyd, M.D., Professor of Pathology, University of Manitoba; Pathologist to the Winnipeg General Hospital, Winnipeg, Canada. Third edition, thoroughly revised, 866 pages with 477 illustrations and 13 colored plates. W. B. Saunders Company, Philadelphia and London, 1933. Price, $10.00 net.

URINE AND URINALYSIS—By Louis Gerchenfeld, Ph.M., B.Sc., P.D., professor of bacteriology and hygiene and director of the Bacteriological and Clinical Chemistry Laboratories at the Philadelphia College of Pharmacy and Science. Illustrated with 36 engravings. Lea & Febiger, Philadelphia, 1933. Price, $2.75.

WHEAT, EGG OR MILK FREE DIETS, with Recipes and Food Lists, by Ray Balyeat, M.D., F.A.C.P., Director of the Balyeat Hay Fever and Asthma Clinic, Associate Professor of Medicine and Lecturer on Diseases Due to Allergy, University of Oklahoma Medical School, assisted by Elmer M. Rusten, M.D., and Ralph Bowen, M.D., of the Balyeat Hay Fever and Asthma Clinic, Oklahoma City, Oklahoma. J. B. Lippincott Company, Philadelphia, 1933. Price, $2.50.

BOOK REVIEWS

THE ABILITY TO PAY FOR MEDICAL CARE

By Louis S. Reed, Ph.D., Publications of the Committee on the Costs of Medical Care: No. 25. The University of Chicago Press, Chicago. Price $2.00.

This volume is one of the most interesting of the reports of the Committee on the Costs of Medical Care. It discusses the national income and its distribution; the national expenditures; the cost of living; and compares with these items the cost of medical care. The committee concludes that it is difficult to determine the least sums for which, on the average, adequate medical care can be furnished. Nevertheless, it seems certain that the cost of such care, even if it were provided in the most efficient manner and with no wasted expenditure, would represent sums far larger than the great mass of the people in the lower income levels now spend for medical service. It is evident, therefore, that if all the people are to receive adequate medical care, some different means must be devised for paying for such a service. The committee does not conclude in this volume that government subsidy is the only means of supplying this deficit, but certainly, the report permits the reader to readily make such a deduction.

In their summary the committee makes this very significant and important statement: "In the very nature of the case, the conclusions of this study are not put forward with a claim to finality."

CLINICAL DIAGNOSIS

Physical and Differential. By Newton S. Stern, A.B., M.D., Associate Professor of Medicine, University of Tennessee, School of Medicine, Memphis. Price, $3.50. The Macmillan Company, New York, 1933.

This book has been developed primarily as an aid in teaching medical students the proper way to take a case history and the correct manner of making a thorough physical examination. The latter two sections of the book, however, are devoted to the necessary steps in making a diagnosis and a discussion of the symptoms and signs elicited in a careful examination of the patient.

The order of presentation is definitely more fitted for classroom use by medical students than as a reference text for the medical practitioner. The latter half of the book, however, dealing with the principles in practice of differential diagnosis and the significance of symptoms and signs respectively will

prove an inspiration and a faithful guide to the physician who will carefully study its content.

Diagnosis is an art, and as such cannot be taught by service alone. The processes of reasoning and judgment, the eliciting of symptoms, and the precise balancing of the data acquired, cannot be taught by rule. In appreciation of this fact the author has attempted to direct profitable study by thorough analytic reasoning as applied to a few common conditions such as tuberculosis and heart disease, rightly assuming that the physician or student who can correctly balance the data secured in the examination of the patient suffering from these conditions has developed reasoning and judgment which admit him into the inner shrine of the art of medicine.

THE COSTS OF MEDICAL CARE

A Summary of Investigations on the Economic Aspects of the Prevention and Care of Illness. By I. S. Falk, Ph.D., C. Rufus Rorem, Ph.D., and Martha D. Ring. With a foreword by Ray Lyman Wilbur, M.D. Publications of the Committee on the Costs of Medical Care: No. 27. The University of Chicago Press, Chicago. Price $4.00.

The field of medical economies has been monopolized during the past few months by the Final Report of the Committee on the Costs of Medical Care. This final report has been commented upon in practically every medical publication and in many lay journals. The recommendations of the committee are so radical and far reaching, that the ground work of the practice of medicine appeared threatened. In spite of the disagreement which has arisen between the leaders of organzied medicine and the personnel of the committee, all recognize that this tremendous study extending over a period of five years has developed data of a most significant and far reaching character. This report, one of the largest to be published by the committee, offers a resumé of the twenty-six volumes of the publication on the specific aspects of the prevention and care of illness which have preceded this volume, and it is upon the facts summarized in this book that the Final Report of the Committee on the Costs of Medical Care is based. The two publications should be read together, if one is to arrive at a scientifically accurate appreciation of the economic problems discussed. The volume is the outstanding source book of its kind which has been offered to the medical profession and the public at large. If your budget allows only a limited expenditure for books dealing with the business side of medical practice, the reviewer would recommend that this summary of the committee, together with the volume reporting their final recommendations, be the two books to be purchased.

DISEASES OF THE HEART

Described for practitioners and students, by Sir Thomas Lewis, C.B.E., F.R.S., M.D., D.Sc., LL.D., F.R.C.P., physician in charge of department of clinical research, University College Hospital, London, physician of the staff of the Medical Research Council. Price $3.50. The Macmillan Company, New York and London, 1933.

The author of this volume, Sir Thomas Lewis, needs no introduction to the medical profession in any English speaking country. His long experience as a teacher and observer in the field of cardiology gives him a background of clinical experience excelled by none and equalled by few. The physician, therefore, is entirely justified in viewing this latest volume by Sir Thomas Lewis in pleasant anticipation, and he will not be disappointed, since the author has discussed the diseases of the heart, particularly angina pectoris, as only the experienced clinician can view a phase of clinical medicine.

He introduces his discussion by enumerating the clinical signs of heart failure, viewing the symptoms in the order of their frequency and importance. He next treats, with a special thoroughness, angina pectoris. The disturbances of rate and rhythm, cardiac enlargement, and valvular diseases, are all discussed from the standpoint of symptomatology and the special methods of diagnosis. The bacterial diseases of the heart as well as those resulting from associated diseases or toxic states are likewise thoroughly covered. The closing chapter of the volume deals with the diagnosis, prognosis, and treatment of cardiac conditions, and is essentially a summary of the subjects discussed elsewhere in the volume.

HOW TO BUDGET HEALTH

Guilds for Doctors and Patients. By Evans Clark, Director Twentieth Century Fund. Harper & Brothers, Publishers. New York and London, 1933. Price $4.00.

The Twentieth Century Fund was active in sponsoring and financing the Committee on the Costs of Medical Care during their five year period of investigation into the economics of medical practice in this country. This same organization during the past three years has sponsored and financed a second investigation whose purpose it was to investigate and develop a plan of guild practice following a plan made public in an article by Edward A. Filene in October of 1930 under the title "A Cure for Doctor's Bills." This volume comes, therefore, in the manner of a sequel to the report of the Committee on the Costs of Medical Care, and in a sense is complementary to the report of this committee, in so far as the report endorses the broad principles of "group practice" and the division of medical costs between members referred to as "group payments."

This plan is essentially one in which general practitioners and specialists group themselves to form medical guilds in which the patient would receive the special benefits accruing from conferences and consultations of the various physicians involved. Like all other plans which have emanated from lay groups of investigators, the financial side of the system is

to be taken over by laymen who will annually collect a stipulated fee from the members, and will in turn pay the cooperating physicians a fixed salary.

One searches the volume in vain to justify the author's claims that "this system . . . would reduce both operating and consumer costs by preserving the independence of the medical profession, would avert the evils of state or other forms of socialized medicine, which put doctors on government or corporation pay rolls which take orders from politicians or business executives." Should one assume that the laymen directors of such a medical guild, collecting fees and paying the medical staff, would remain "shrinking violets" in so far as dictation is concerned? Would this preserve the independence of the medical profession from the orders of business executives?

To the physician interested in the economic future of medical practice in this country this volume will prove informing and interesting, although we do not believe that the plan of guild practice recommended offers a satisfactory solution for the ills which are alleged to affect the economic aspect of medical practice of today.

THE INCIDENCE OF ILLNESS AND THE RECEIPT AND COSTS OF MEDICAL CARE AMONG REPRESENTATIVE FAMILIES

By I. S. Falk, Ph.D., Margaret C. Klem, and Nathan Sinai, D.P.H., Publications of the Committee on the Costs of Medical Care: No. 26. The University of Chicago Press, Chicago. Price $3.00.

This publication, report No. 26 of the Committee on the Costs of Medical Care, sets forth in detail the Committee's findings regarding three problems which they considered of paramount importance; one, how many illnesses occur in a population during twelve consecutive months; two, what agencies and facilities do families of various economic levels use for the prevention and care of illness; three, what is the cost of medical care to these families and how is the total bill distributed among the families and among the various types of practitioners and facilities utilized?

To answer these questions, the Committee made a survey of 8,758 families in seventeen states and the District of Columbia. From these facts, the Committee concludes: "Society must look to the organization of medical facilities and their effective utilization; society must extend the demand for medical care and must provide effective means of purchase." They further conclude: "If, each year, each family incurred charges of $108.00 or expenditures of $104.00, there could be no serious issue as to the ability of all, except the very poorest families, to pay the cost of medical care. But these costs are not distributed uniformly."

THE INTERNATIONAL MEDICAL ANNUAL

A Year Book of Treatment and Practitioner's Index. Edited by the late Carey F. Coombs, M.D., F.R.C.P., and A. Rendle Short, M.D., B.S., F.R.C.S. William Wood & Company, Baltimore, 1933. Price, $6.00.

Physicians, particularly those in general practice, must rely to a very large extent upon the work of outstanding specialists for an evaluation of current literature. It would be physically impossible for a physician in general work to scan even superficially all of the high grade medical journals published today. The specialist, on the other hand, may find time to review the more important contributions in his particular field and from such a review, epitomize the advances in his specialty for the use of those not in a position to make such a review for themselves.

It is with this idea in mind that the publishers of the International Medical Annual have, during the fifty-one years' publication of this dictionary of practical medicine, supplied just such a compilation of medical advances epitomized by specialists in their respective fields. During the past year there have been no outstanding or epochal discoveries, but the many contributions to our knowledge concerning the diagnosis and treatment of many diseases causes the volume to be of particular interest this year.

The volume deals with the advances made in the general field of medicine, surgery and the recognized specialties, with particular attention directed to problems of diagnosis and treatment. The subject material is arranged in alphabetical form so that the particular subject upon which information is desired may be found without tedious searching through indices or scanning the contents of the several chapters. The volume is well illustrated with line drawings and reproduction of photographs. Some illustrations are presented in colors. The volume should become the desk companion of every physician who is engaged in the general practice of medicine.

THE TECHNIQUE OF CONTRACEPTION

An outline by Eric M. Matsner, M.D. The Williams & Wilkins Company. Baltimore, 1933. Price $.50.

During the past few years several books have been published outlining and critically discussing the various methods of contraception now employed. In each of these books the treatment of the subject matter is essentially the same in so far as methods are concerned. This small pamphlet eliminates much of the detail and controversial material contained in the larger volumes, but presents in essence all that the larger volumes cover.

Because of its small size and its inexpensiveness, the pamphlet will be found especially useful by physicians who desire to place such a treatise in the hands of their patients for reading. The material presented in this volume has been accepted in its entirety by the American Birth Control League.

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LEADS IN DIAGNOSIS*

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Every physician who has had a moderate experience in clinical medicine realizes sooner or later that the old adage, "Experience is the best teacher," always holds true. Byron Branwell correctly stated, "The only real knowledge of disease is that which is acquired at the bedside by careful and minute observation of the living patient." Not until the vicissitudes of actual contact with patients face us are we sufficiently impressed to learn and remember what we learn.

The above conviction has led me to believe that a recital of some of the cardinal things which I have gleaned from actual experience and from the experience of others, might be of some help to you in your diagnostic problems. My remarks will necessarily be a rather heterogenous collection of points or leads which I deem helpful in the diagnosis of a variety of conditions. I have been prompted to undertake this rather unusual and bizarre presentation by the firm belief that many of us who are otherwise competent, do not have sufficient "Sherlock Holmes" in our make-up and in our analysis of cases are prone to disregard or not recognize certain leads, particularly in the patient's story, which, if properly developed, will many times result in a correct diagnosis.

The master detective is a master because he is able to pick out the essential points in solving a mystery and to disregard the multitude of insignificant clues to which the amateur clings. Likewise, the master clinician, as his experience increases, becomes an expert in assimilating the patient's story and is able quickly to keep a mental record of the digestible portion and discard the residue. If you will allow me to elaborate a little more on the similarity of the detective and the clinician, may I add that the detective usually fails if he does not spend ample time in getting a detailed story of events, so that an unbroken chain of evidence may be developed. He does not jump at conclusions. Since the physician's problem is identical with that of the detective, may I stress once more, as it has been stressed thousands of times before, that the patient's story is of utmost importance. How frequently, even today, is it passed over on account of our zeal to take a blood count, or an x-ray picture, or to get our hands on the patient?

I do not wish to minimize the importance of physical examination and laboratory procedures, but I do desire to emphasize the fact that many patients with serious organic disease show very little on physical examination. For instance, how much help is the physical examination in the diagnosis of duodenal ulcer? Which is of more help in suspecting early pulmonary tuberculosis, the patient's story or the physical examination of the chest? I defy any man, no matter how expert, invariably to make a diagnosis of pulmonary tuberculosis on physical examination alone. The patient's story provides the lead, and the diagnosis is established by x-ray examinations, repeated physical examination, and observation.

The above facts emphasize the necessity of being deliberate in sizing up a case. The survey should start as soon as the patient is seated. Clues may develop immediately and the first consideration in taking a history should be to obtain data which help to classify the patient as an organic or functional case, or both. Many patients with functional disorders give themselves away immediately by initiating some pet episode, such as a belching attack or a weak spell. Others provide a lead by their garrulity and verbosity and their willingness, at once, to discuss their numerous operations. It is always a good idea to have a confidential chat with a close relative, husband or wife, while the patient is being prepared for examination. All-important information may be obtained. For example, a history of domestic infelicity, bad temper, emotional spells, attacks of palpitation, all help to classify the case. The general appearance of the patient may be very help-

* Address of the Chairman, Section on Medicine, Eighty-second Annual Session, Iowa State Medical Society, Des Moines, May 10, 11, 12, 1933.

ful. Emaciation, exophthalmos, excitability, disturbance of gait, etc., may be recognized immediately.

History taking is really an art—one which some acquire easily and others never acquire. The ideal history taker is not a cross-examiner, but one who removes all suspicion from the patient and succeeds in convincing him that the history is a very important part of the examination, and that for his own good the whole truth is desired. The man who has mastered the art of history taking can unfold in a short time the essential facts, laying stress only on the things which are pertinent in any given case. In certain types, family history is of utmost importance, as, for instance, in neoplasms, hypertension, neurosis and migraine. Previous personal history assumes importance when suspecting syphilis, organic heart disease, diabetes, nephritis, etc. All phases of history taking may require elaboration in given cases. In obtaining the history of the present illness, it is most important to have the ability to distinguish the predominating, cardinal symptoms from the great amount of chaff and then attempt to weave in the secondary symptoms so that a dependable fabric will be the result. Obviously, in this discussion I cannot go into great detail regarding history taking, but the few remarks I have made will form sufficient groundwork for the remainder of my address.

The chief purpose of this presentation is to record a few experiences in my practice which have convinced me that pain as a symptom means nothing until it is analyzed, and I refer particularly to the type of pain which is so commonly passed up with a diagnosis of neuritis or rheumatism. These two names, like intestinal influenza, are being used daily to cover up a multitude of errors, and by the way, some fatal errors. Any pain which persists and is not relieved by nerve sedatives or ordinary analgesics, deserves thorough investigation. Pain in a patient who is not acutely ill, which is severe enough to require morphine, commonly originates from a malignant focus. For example, Mr. D., sixty-seven years of age, came to me with a complaint of persistent pain in the lower back and hips, general weakness and some loss of weight. He had just undergone a thorough examination elsewhere and his symptoms were attributed to influenza from which he had suffered six weeks previously. The man's age, the general weakness and the persistent pain were leads. A finger in the rectum revealed an irregular, moderately hypertrophied prostate which was causing no urinary obstruction. This finding demanded an x-ray examination of the pelvis and spine which proved to be the seat of malignancy, metastatic from carcinoma of the prostate. The history guided the finger into the rectum and, by the way, examination is not thorough until you either feel or look into the distal end of the gastro-intestinal tract.

Another man, Mr. N., seventy-two years of age, came under observation with a complaint of four months' duration, consisting of continuous pain in the sacral region and both hips, radiating down the legs, and made worse by motion. The patient had been under treatment for sciatic rheumatism with no result. The pain had become increasingly more severe and opiates were necessary to relieve it. He had surprisingly few general symptoms and had noticed only slight loss in weight. The severity of the pain and the necessity for opiates suggested malignancy. Physical examination revealed nothing except slight edema and tenderness over the sacrum. X-ray examination made it possible to demonstrate malignancy of the sacrum, in all probability sarcomatous.

An elderly woman came to the hospital by ambulance from a sanitarium not far from Des Moines where she had been receiving all types of electric and physiotherapeutic treatments for what was thought to be sciatic neuritis. She was full of sedatives when she entered the hospital. The lead in her history was that she had had a radical operation for cancer of the breast three years previously. X-ray examination showed malignancy in the head and neck of the left femur with a pathologic fracture, as well as metastatic lesions in the pelvis, lower spine and ribs. Her money had all been spent for unnecessary and inexcusable electrotherapy and physiotherapy. I repeat that a history of pain occurring over a period of time, severe enough to require morphine, suggests malignancy, or at least makes it mandatory that the probability of malignant disease should be excluded.

Patients frequently present themselves with a complaint of pain or various types of paresthesia in the lower extremities. These cases, in my experience, are frequently studied too superficially and a diagnosis of neuritis too often made. Strange as it may seem, this, like intestinal influenza, is always a satisfying diagnosis as far as the patient is concerned. Now, it is very important to remember that while elderly people, particularly, have a habit of being afflicted with rheumatism and neuritis, they are also prone to develop other serious maladies; for instance, circulatory disturbances of the extremities which may cause pains and cramps in the muscles, aching legs which are worse at night, paresthesia of various kinds, such as tingling and numbness, vague or more severe pains, and vasomotor disturbances, such as ery-

thromelia. The usual tests for peripheral arteriosclerosis, such as palpation of the dorsalis pedis pulse and testing of circulatory efficiency by elevation of the limb, are easily performed and the x-ray frequently visualizes the sclerotic arteries. Buerger's disease frequently begins with rheumatic pains in the extremities and it is well to bear in mind his warning that any discomfort in the foot or leg justifies careful investigation.

Many a patient with combined sclerosis, complaining of various paresthesia of the extremities, has paraded around with a diagnosis of neuritis until the parade finally had to be called off on account of lack of function of the extremities. Paresthesia, such as tingling and numbness, especially when associated with a slight disturbance of coordination suggests a cord lesion associated with pernicious anemia. Three things should be done if nothing else can be accomplished. The vibratory sense should be tested; the content of the stomach should be examined, and a blood examination should be made. A combination of decreased or absent vibratory sense, achlorhydria, and evidence of anemia of the primary type, are quite conclusive, although the latter finding is not necessarily constantly present.

Abdominal distress of some character is probably the most common symptom which confronts the practitioner and the correct interpretation of this distress is often very difficult because in many cases a decision has to be made in a comparatively short time. I refer particularly to those cases where the probability of an acute surgical abdomen exists. In no other field of diagnosis is it more important deliberately to take sufficient "time out" to obtain a detailed story of the events leading up to the probable emergency. In the consideration of suspected abdominal emergencies, hasty history taking and physical examination certainly increase the possibility of error. Snapshot diagnosis is entirely out of place when a patient's life hinges on our judgment. We learn in standard textbooks that there are certain pathognomonic symptoms of the various types of abdominal emergencies, such as appendicitis, perforated ulcer, ruptured gallbladder, ruptured tubes, etc., but in practice we find that any and all of these conditions can be very closely simulated by a variety of non-surgical conditions. From my experience and observation, I very much doubt that anyone can enumerate a set of symptoms which are pathognomonic of acute appendicitis and are not frequently duplicated by other conditions. Certainly if you depend on acute pain and tenderness over McBurney's point you will frequently be led into serious errors. Christian Fenger, great diagnostician that he was, made so many errors in the diagnosis of acute appendicitis that he used to designate that part of the anatomy as "that damned right side."

Therefore, in these cases, it is extremely important to "stop, look and listen." Hasty decisions are frequently fraught with grave errors. A list of the many non-surgical possibilities must be constantly borne in mind and given due consideration before the abdomen is opened. It is not so necessary to make a correct diagnosis of intra-abdominal difficulty, as it is to be able to say definitely that an acute surgical abdomen exists. Honest mistakes only are excusable. Mistakes due to haste, carelessness and inherent indolence are almost criminal. Once an honest decision has been made, then procrastination should be shunned and the diagnostician should willingly assume the responsibility of error.

A few illustrations of non-surgical conditions simulating acute surgical emergencies are in order. A middle-aged, married man was accompanied to the hospital at midnight by his physician. A tentative diagnosis of a perforated duodenal ulcer had been made on the following history: about three hours before entrance to the hospital he was seized with sudden severe epigastric pain accompanied by vomiting, increased pulse rate, and moderate evidence of shock. A history of occasional attacks of indigestion in the past was obtained. Examination of the abdomen revealed marked rigidity of the upper abdomen but not the characteristic board-like rigidity of a ruptured viscus. His pulse rate was 100 and of good quality. He did not appear sick enough to have a perforated ulcer. On further questioning it was learned that for some weeks before entrance he had been complaining of pains and some swelling of the knee joints. Recently he stated he had developed black and blue spots all over the legs and feet. Investigation developed the fact that the thighs, legs and feet were covered with petechiae and purpuric lesions. The knee joints were somewhat swollen and painful. With this lead, it was reasonable to believe that a sudden onset of intestinal purpura could well account for the abdominal condition. He, therefore, was not operated upon and by the following morning the abdominal symptoms had completely subsided. Subsequent removal of an enormous amount of focal infection in the teeth resulted in complete recovery.

An elderly, married lady was seen in consultation because of the sudden onset of right-sided abdominal pain, nausea and vomiting. Examination of the abdomen revealed moderate tenderness over McBurney's point and some muscle spasm. Inquiry brought out the fact that she had been a mild diabetic for years. The odor of the breath

suggested acetone. A previously neglected urine examination was made and a large amount of sugar and acetone was found. As soon as the proper treatment for diabetic acidosis was instituted, the nausea, vomiting and abdominal pain rapidly disappeared. Medical literature records not a few cases of diabetic acidosis operated upon for appendicitis.

Dr. Max Thorek recently reported the two following cases:

"A man, fifty years of age, came under observation complaining of quite severe pain in the right hypochondrium. The pain radiated to the right shoulder. He had a subicteric hue to the conjunctiva. A tentative diagnosis of gallbladder disease was made. While under observation, all manifestations of herpes zoster appeared and the lesions were distributed over the lower part of the right chest, anteriorly and posteriorly.

"A man was sent into the hospital with what appeared to be classical manifestations of an acute appendicitis. He was prepared for operation. Before the anesthetic was given it was discovered that the patient had been exposed to much fresh paint and a diligent search disclosed the characteristic blue line of lead poisoning along the gingival border of the teeth. It was further decided that besides suffering from plumbism, the patient acquired an acute gastro-enteritis which successfully mimicked appendicitis. The man promptly recovered under the proper medical management."

About one year ago I was called in consultation to see an elderly man who, about twelve hours previously, had developed sudden generalized abdominal pain, which gradually localized in the right loin and showed a tendency to radiate to the groin. He had vomited twice. There were no urinary symptoms, no respiratory symptoms or symptoms referable to the heart. The x-ray of the urinary tract was negative for stones and the urine showed no blood or pus cells. The abdominal findings were typical of acute retrocecal gangrenous appendicitis. The general examination revealed a marked degree of generalized arteriosclerosis, and arteriosclerotic heart disease was undoubtedly present, but because of the typical local findings, a diagnosis of retrocecal appendicitis was made unhesitatingly. Operation showed a normal appendix and further exploration of the abdomen did not help in finding the cause for his pain. Fortunately he made an uneventful recovery from the laparotomy, and to our surprise the pain disappeared and did not recur while he was convalescing. Abdominal arteriosclerosis, in all probability, accounted for this apparently typical surgical emergency.

Inquiry regarding venereal disease is quite commonly neglected in the haste to make a diagnosis. Chronic prostatitis and vesiculitis occur in some degree in about 30 per cent of all adults, and acute seminal vesiculitis may closely mimic acute appendicitis. A tender spermatic cord may be palpated. Epididymitis may be present or tender vesicles palpated by rectum. In fact, a careful rectal examination should never be neglected in the presence of a possible surgical emergency.

There are many more non-surgical conditions which demand consideration in a hasty differential diagnosis and, of course, I have not had personal experience with all of them. Serious errors can frequently, but of course not always, be avoided by keeping a mental picture of the non-surgical possibilities. Misinterpretations are bound to occur because no two people react in the same way to the various factors which cause disease. We can make our deductions only from observed facts, and the supply of facts is not always adequate. I know of a juvenile tabetic who underwent a useless gastro-enterostomy. Many sufferers from lead colic have submitted to an operation on a mistaken diagnosis. "A case of encephalitis lethargica was operated on the supposition that he had an inflammed appendix." Spinal caries, acidosis, atheroma of the abdominal vessels, right hip joint disease, pyelitis of pregnancy and other kidney conditions can and do simulate abdominal emergencies, and it is hardly necessary to mention the frequency of abdominal pain in chest conditions, particularly pneumonia in children.

I have been very much impressed at times with the valuable information which can be obtained from close inquiry regarding the symptoms and presence of skin eruptions, and from a careful examination of the skin. The presence of dermographia practically always means that you are dealing with a nervous person. Pruritis is a very important symptom and its cause should always be ascertained. It may mean incipient obstructive jaundice; it may suggest the presence of diabetes; it can be purely functional, but that the symptom should not be disregarded I learned to my great embarrassment several years ago.

One of my elderly, rather neurotic female patients consulted me one afternoon when I happened to be very busy. She was complaining of a severe generalized itching of several days' duration and requested a prescription for relief. I obligingly and hurriedly wrote her a prescription for an antipruritic lotion. Some weeks later I learned that she had been operated upon at the Mayo Clinic for a tumor of the common bile duct. Needless to say, since then I respect pruritis.

A young athlete, eighteen years of age, came in

complaining of general malaise, anorexia, fever and indefinite distress in the left upper abdomen. The examination was entirely negative except for a temperature of 101° and a moderate leukocytosis. In observing his skin I noticed some superficial recent scars just below the right knee. I obtained the important information that three weeks before while wrestling he had sustained a mat burn which became infected, exuded considerable pus and healed quite slowly. This lead was infinitely more important than the entire previous survey. It at once suggested the possibility of a perinephritic abscess and ten days later a large, left-sided perinephritic abscess was drained. In another case a history of crops of furuncles on the back of the neck suggested the presence of perinephritic abscess, after influenza had been diagnosed. Truly the skin is a mirror of the body and frequently reflects pathologic conditions which otherwise might go undiagnosed for some time.

The more one delves into his past experiences, the more he necessarily comes to feel that a successful diagnosis does not depend so much on whether all the latest laboratory procedures have been utilized as it does on whether we have used to their utmost capacity what God gave us free of charge—our eyes, ears, nose and hands. The perfect diagnostician is not among us. Errors which are the result of honest endeavor and conscientious conviction are excusable, for it is human to err, but errors due to haste, greed, negligence and utter lack of knowledge must and can be eliminated from the modern practice of medicine.

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RUPTURE OF WOUNDS FOLLOWING ABDOMINAL OPERATIONS*

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The rupture of a wound following an abdominal operation is a serious mishap. There is practically nothing more distressing than the finding of omentum or coils of intestine in the dressing of a patient recently operated upon. So important are the factors that enter into its etiology, its treatment, and its results, that I feel a discussion of these points is permissible at this time. Its occurrence is rather infrequent, approximately one-tenth of one per cent. Literature on the subject is extremely limited. In writing of it Emil Ries[1] made this statement: "The surgical accident indicated in the title of this paper is a rather common occurrence, the literature of which is undoubtedly very much smaller than it should be. The tendency to report successful cases and to leave to oblivion cases in which the recovery has not been of the proverbial uneventfulness, is too human to be overcome readily."

It has occurred three times in my own experience, in clean wounds, and in cases where you would not expect such an accident.

Case 1. A male thirty-eight years of age, was a bridgebuilder in the railway employ. He weighed 190 pounds and was apparently in robust health. The operation was an appendectomy with the abdomen considerably distended and the patient suffering from bronchitis and severe cough at the time of operation. A right rectus incision four and one-half inches long was made level with the umbilicus, and extending through one transverse linea. This incision was used to permit an exploration of the upper abdomen. The wound was closed by layer number two plain catgut in the peritoneum and number two chromic in the fascia. Three retention sutures of coarse silkworm gut were made down to and including the fascia and the skin was closed with clips. The convalescence was not very satisfactory. In spite of the fact that the bowels were moved daily with enemas, after forty-eight hours, there remained some distention. Emesis occurred once, on the third day. The wound was examined and appeared normal at this time. The clips were removed on the sixth day and the silkworm sutures were taken out on the eighth day. Two hours after removing the retention sutures the patient coughed and felt the wound give way. On opening the dressings several coils of intestines presented themselves in the wound which had opened through its entire length. The dressings were replaced and the patient taken to the operating room where, under gas and ether anesthesia, the exposed coils were washed with sterile water and, after liberating some omental adhesions from the deep portion of the wound, replaced in the abdomen and covered with a layer of rubber tissue wide enough to extend well under the deep margins of the wound. The plain gut in the peritoneum had disappeared but the chromic in the fascia was still present although it was torn throughout the upper three-fourths of the wound. Through and through sutures of coarse silkworm gut were placed every three-fourths of an inch, the ends grasped on either side with forceps and held taut by assistants. A running suture of chromic gut number two was again used in the deep layer, but made to include a portion of the muscle on each side, drawn just snugly enough to approximate edges, and tied at the lower end after removal of the rubber tissue. A like layer of number two chromic was similarly placed in the fascia. Three interrupted chromic sutures were also placed in the fascia and made to include running suture and some of muscle. The interrupted

* Address of the Chairman, Section on Surgery, Eighty-second Annual Session, Iowa State Medical Society, Des Moines, May 10, 11, 12, 1933.

silkworm gut was now tied and clips were again used to approximate the skin. The wound healed promptly and the tension sutures were removed in ten days. The patient was up on this date, and left the hospital on the fourteenth day after the reclosure of the wound.

Case No. 2. A male, fifty years of age, weighed 145 pounds, and suffered from a slight cachexia. The operation was an exploratory laparotomy for carcinoma of the stomach. A right rectus incision four inches long was made in the upper abdomen level with the umbilicus upward. The wound was closed in layers, number two plain catgut in the peritoneum, number two chromic in the fascia. Two retention sutures of heavy silkworm gut were placed down to and including the fascia and the skin was closed with clips. The patient vomited twice during the first twelve hours but there was no further evidence of distress from the operation. After forty-eight hours his bowels moved daily with enemas. The skin clips were removed in six days and the silkworm gut sutures on the eighth day. On the morning of the ninth day, the patient complained of the dressings being wet. An examination revealed the fact that the dressings were soaked with a bloody serum. On lifting the dressings there appeared to be a complete separation of wound margins with an intestinal coil presenting itself in the wound. The dressings were replaced and the patient taken to the operating room where, under ether anesthesia, the intestinal coil was washed with sterile water and gently replaced. The omentum was found adherent to the deep and under surfaces of the wound. This was loosened and replaced in the abdomen. Rubber tissue was placed over omentum and intestines, and extended well under the deep margins of the wound. Through and through sutures of heavy silkworm gut were placed every three-fourths of an inch with forceps applied to the ends and held up by the assistant. Running suture of number two chromic catgut was placed in the peritoneum and made to include a small portion of the deep margin of the muscle. The latter was made necessary because of some retraction of the peritoneum under the muscle margin to which it was adherent. Before closing the lower end of this suture, the rubber tissue which had been placed to protect the intestine, was gently removed. The fascia was closed with a running suture of number two chromic, including a margin of the muscle, and drawn just tightly enough to approximate the margins. The retention sutures still being held snugly, were now tied and the skin margins closed with clips. A wide adhesive strip was placed snugly over the dressing and extended well around on the back. The wound was well healed on the tenth day when the retention sutures were removed.

Case 3. A woman, sixty years of age, rather fleshy with pendulous abdomen; had borne eight children. Her uterus contained a fibroid the size of an orange. The operation was a supravaginal hysterectomy. An incision was made through the inner third right rectus. The wound was closed with a number two plain catgut continuous suture in the peritoneum and number two chromic gut in the fascia. After the second day the bowels moved regularly with enemas, but there remained throughout some meteorism and some abdominal distress. The patient vomited on the fifth day and again on the eight day after removal of the retention sutures. The patient complained at this time of the dressings feeling wet. An examination revealed a separated wound throughout the length of the incision and a number of intestinal coils and tag of omentum presenting themselves in the wound. The patient was taken to the operating room immediately and given general ether anesthesia. At the bottom of the wound the omentum was found with the intestine, plastered quite firmly to the lateral walls. These were liberated and pushed back out of way. A wrist of rubber glove was placed over the intestines for protection. No catgut was found in this case. Reclosure was made by through and through sutures of heavy silkworm gut, including all layers, placed every three-fourths of an inch. Hemostats were placed on the ends of the sutures, these being held up with some traction while continuous sutures of number two chromic catgut were placed in the peritoneum and number two chromic in the fascia, as well as three interrupted sutures in the fascia and surrounding or including the running suture, the ones at each end being just inside the knot in the running suture. The peritoneum and fascia were somewhat retracted from cut edges in this case so that it was necessary to catch some of the muscle with running sutures in order to get the peritoneum. The same procedure was followed in closing the fascia.

It is impossible, in most cases, to determine a single definite reason for the occurrence of the above described condition. The cause is probably the result of a combination of conditions. Some of the earlier writers have suggested a hematoma or a low grade infection as factors. A hematoma large enough to separate the lateral wound surfaces may aid in producing the space through which the evisceration eventually appears. Infection of the wound may produce rapid absorption of catgut and some necrosis of the walls with early separation. These may occur in the superficial layers with no disturbance of the deeper layers and no evisceration. Modern technic has aided greatly in eliminating these causes.

Starr and Nason[2] in a recent article, containing an analysis of fifteen cases, intimated that the location of the incision made little difference, six of their cases being in the upper abdomen and nine in the lower abdomen. However, all their cases occurred in median, paramedian or rectus incisions.

Horsley[3] felt that the greater intra-abdominal pressure exerted against the incision above the umbilicus, coupled with severing the nerve supply of the rectus muscle, rendered this portion of the abdomen less resistant and more susceptible to separation than the lower region. He further

argued that the incision below the umbilicus is usually near the inner border where the nerve supply is but slightly affected. A report of twenty-one cases occurring in a large institution showed 65 per cent above the umbilicus. On the other hand, Freeman[4] claimed that rupture occurred more often in the lower portion of the abdomen, principally because the omentum is more in evidence in this section. Upper abdominal incisions are almost universally midline or muscle splitting and this condition coupled with the greater intra-abdominal tension, may account for its slightly greater occurrence in this area.

Shipley[5] believed that tightly tying the sutures, thereby producing a certain amount of necrosis, was a factor in a large number of these cases, but we have observed that rupture occurs in cases where retention sutures extend only to and including the external fascia. It has happened under all methods of suturing and with all kinds of suture material; it happened in the days of through and through suturing; it happens today under closure by layers, even with retention sutures; it happened in the early days of surgery; it happens today in the hands of skilled technicians; it has happened in many different operations for various conditions. Incisions through the muscle, however, seem more susceptible to the accident than the muscle sliding incision, probably because of the disturbed nerve supply, and the lack of buffer action of the muscle in the former. Under some conditions a midrectus or median incision is the one of choice because it affords greater room and freedom of action, and there may be a desire to explore a wide area or to come directly down upon the field of operation. Therefore, with some justification, and perhaps without seriously considering the possibility of wound rupture, we select this route. In so doing we have inevitably weakened the abdominal wall, even though the closure is perfect, and we have greatly reduced the buffer action of this muscle during coughing, sneezing, or vomiting, any or all of which may follow laparotomy. There is of necessity a great strain on the peritoneum and a stitch may tear out allowing an opening into which an entering wedge of omentum thrusts itself, crowding through the muscle rent and marking the beginning of a rupture, which eventually terminates in the skin separation as soon as the retention sutures are removed.

There are a number of factors which seem to enter into and play a prominent part in the production of rupture of fresh wounds.

First: An incision directly through the muscle which cuts off some of the nerve and blood supply and greatly reduces the muscle resistance to intra-abdominal pressure.

Second: The lowered vitality of the patient due to blood dyscrasias, such as occur in carcinoma, syphilis, diabetes, renal disease, and the various anemias.

A surgeon of forty-five years' extensive experience stated: "These ruptures occur in only one class of patients; namely, those with low grade nourishment who do not develop the ordinary tissue reaction to repair; longstanding gastric ulcers; tuberculous peritonitis; carcinoma in abdomen usually of stomach. It is not the fault of the closure at all, as years ago abdominal wounds healed just as well with massive through and through sutures."

We cannot ignore the opinions of such men, but the bulk of evidence indicates that other factors enter into the production of this accident.

Third: Increase of intra-abdominal pressure due to meteorism, coughing, vomiting, sneezing, etc.

Fourth: There is the possibility of faulty technic which I have not seriously considered, because I think it is rarely if ever primarily a cause. The wide spacing of peritoneal sutures and the failure to include the deep fascia with the peritoneum, if the incision is through the rectus or in the midline, may allow sufficient space for an entering wedge of omentum that would probably have no effect and extend no further, in a muscle retraction incision.

Literature on the subject of acute abdominal rupture is so limited that in the preparation of this article I consulted, by means of a short questionnaire, a number of prominent and experienced surgeons in surrounding states, in whose skill we have the utmost faith.

The questions included the following:

1. How many cases of acute abdominal rupture have you had, or what is the percentage in your surgical experience?
2. In what kind of incision did they follow?
3. What is your opinion as to the inception or beginning of a rupture in its relation to the operation?
4. What is your method of closing the original abdominal wound?
5. What is your method of closing the hernia?
6. What is your mortality rate?

The answers were most interesting and instructive. They at once verified the statement that it may occur in the hands of most skillful surgeons. The number of cases reported by each surgeon varied from four to twenty-one in practices extending over a period of twenty or more years.

Seventy-five per cent of the cases reported occurred after a midrectus incision. Transrectus and midline incisions accounted for most of the remaining 25 per cent, and nearly all of this num-

ber occurred above the umbilicus. No occurrence was recorded in any report where a muscle sliding or muscle retracting incision was used.

This bears out the opinion that an incision directly through the rectus materially weakens the resistance of the abdominal wall at that point, probably because of the loss of nerve supply, and because the muscle fibers, once they have been cut, more readily separate when pressure is applied from the inside.

Opinions as to the time of inception of ruptures varied considerably. However, with but one exception, all agreed that the process starts within the first to seventh day, with about fifty per cent beginning within the first four days. It is my opinion that they all are started within seventy-two hours. With the general knowledge that peritoneal wounds are quickly healed, it seems unreasonable to suspect that any wound of this organ would give way after three or four days. Once well healed it would not separate, but would be carried ahead of any organ forcing its way between the muscle fibers, thus producing the hernia that appears later in the history of a case. Practically all ruptures of fresh wounds show the peritoneum separated and retracted under the edge of the muscle.

The method of closure by the layer of number two plain catgut for the peritoneum and number two chromic for the fascia with retention sutures of silkworm gut seemed to be almost universal. One surgeon reported five cases all closed by the layer method, two of which had retention sutures and three did not. All of the three without retention sutures were ruptured within forty hours. This again would indicate that the process has its beginning within the first few hours, the retention sutures and skin closure preventing evisceration until after their removal.

The closure of the hernial opening was universally done by the layer method of chromic gut, generally with the addition of through and through silkworm gut. Occasionally silk was used for retention sutures. One method of treatment was rather unique and differed materially from the other reports. It should be especially good for infected cases and I am sure the author will pardon me for quoting him, "We have made it a matter of rule here—not to suture any eviscerations. Since we have gone on this policy, I can only recall one patient who died primarily from his eviscerations. There have been deaths, but they have been related to the initial ailment at which the operation was directed rather than to the evisceration itself. In the event that there is a large evisceration a sterile dressing is placed over it and the patient taken, in his bed, to the operating room. He is then given a small dose of spinal anesthesia which relaxes the abdominal muscles, and the intestines are gently pushed back into the abdomen, and a Penrose drain is led through the operative wound. The edges of the skin are then coaptated with wide adhesive strips, a firm purchase being obtained from the back on both sides. Often times we apply an adhesive glue to the adhesive to reinforce the tenacity with which it clings to the skin. The secretions will be led off by way of the Penrose drain. A nasal catheter is put into the nose and through the stomach, upon which suction is exerted and in consequence intestinal distension is reduced. It is my impression that any refinements such as suturing the wound, or putting clips in the skin only contribute to infection. In the instance of one patient described above who died since this method was in vogue, clips were placed in the skin and in a few days the patient re-eviscerated, following which he got a bronchopneumonia and died. This firm adhesive stripping which we apply is allowed to remain in situ for twelve or fourteen days, at which time I believe the intestine has become adherent to the anterior parietal peritoneum and then re-evisceration is almost impossible. On removal of this dressing, if it is believed that the wound is not yet firm, a similar dressing is reapplied. If the wound appears firm, most of the adhesive is taken off and a Dichloramine T dressing is placed between the edges of the separated skin to sterilize the wound and to permit of ready granulation."

A number of replies suggested inbrication of the rectus sheath, and where the fascia can be separated and used in this manner, resistance will undoubtedly be added.

A careful perusal of all the available literature convinces me that a primary factor in the etiology is the weakened muscular resistance caused by entering the abdomen through an incision that separates the muscle fibers directly between the fascial and peritoneal incisions, and the destruction of some of the nerves that control the action of, and reduce the contractile power of, the muscle, This, of course, refers primarily to the rectus muscle through which most of these ruptures occur. Those occurring through midline incisions may be accounted for by the fact that we have no muscle, and must depend wholly upon the fascia, which when not overlapped may separate readily, especially in cases of lowered nutrition or vitality of the individual.

There is an almost universal history in the reported cases of coughing, sneezing, or vomiting, which gives the necessary impulse to rupture, through intra-abdominal pressure and strain to the recently closed peritoneum and muscle.

A very large percentage of all cases on which I have secured any data shows lowered resistance of the patient through syphilis, tuberculosis, the anemias, especially those associated with malignancies, or kidney lesions. The friable peritoneum may pull away from the deep fascial sheath, or wide placing of the sutures may allow a rent, through which vomiting or coughing forces an omental tag to start the process of separation. These I believe to be the predominant factors that set the stage for this unhappy and distressing postoperative accident. The mortality rate is comparatively low; about six per cent in the clean cases, while that of the infected cases is more than fifty per cent.

Treatment should be prophylactic and active. We should remember that the use of a muscle retraction incision destroys less nerve supply and leaves the muscle intact and resistant; that an energetic treatment of blood dyscrasias should be instituted when time permits; and that the peritoneal closure must be carefully made with narrow spacing of sutures which should include the posterior fascia sometimes missed in this closure. When the external fascia is closed, three or four interrupted chromic sutures should be put in place, extending a little beyond the running suture, but surrounding it. The end ones should be placed just inside the knotted end of the running suture to relieve the strain on the knot during vomiting, retching or coughing. The retention sutures should be allowed to extend through the muscle to the peritoneum. It is not necessary to tie these retention sutures tightly enough to constrict or cause necrosis, and they aid very materially during the strain that may come during the first few days.

The actual closure following the rupture is little different from the original closure, after washing and replacing the omentum or intestinal coils. Both the intestines and the omentum should be loosened from the deep or under surface of the wound. A rubber tissue placed over the intestines prevents possible injury from the needle. The next step consists in the coaptation of margins securely and without too much tension. The method used by the majority, and one that gives good results generally, is the combined tension and layer suture method. Tension sutures of coarse silkworm gut, including all layers, should be placed every one-half to three-fourths of an inch, and held taut while running sutures of number two chromic gut are placed in the peritoneum and made to include some of the muscle on each side. A running suture of number two chromic is then placed in the fascia and also includes some of the muscle on each side. Each of these sutures is drawn just tightly enough to coapt the edges without much tension. Three or four interrupted sutures of number two chromic are now placed in the fascia and muscle, the end sutures being placed just inside the knot of the running suture. The tension sutures are now tied and clips or interrupted sutures are used to close the skin.

In conclusion I might add that each of us may sooner or later meet with this accident and its treatment becomes largely a matter of personal judgment. It would seem that mutual benefit might be derived from a more liberal discussion through the medical literature.

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SURGICAL ACCIDENTS*

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An accident is defined as an untoward mishap that is not expected or designed.

In discussing surgical accidents I wish to consider only those which occur during operative procedure and have intentionally eliminated the remote accidental complications that follow surgery, such as embolism, septic infection, tetanus, erysipelas, acute dilitation of the stomach, and intestinal obstruction.

There are few men doing any volume of surgical work, who have not experienced accidents with their technical procedure, which at the time have been very distressing. In a review of the literature we find very little written on this phase of surgery, due to the fact that members of the profession are prone to report their good results and to keep in the background the unfortunate things that happen. Some of the most profound lessons we learn are gained from our own mistakes or from the mistakes of others that have been reported to us in private. If we were more inclined to report these errors to one another it would help in putting us more on our guard and stimulate us to more cautious procedures in order to avoid the various mistakes some of us have made.

As to the causes, surgical accidents may be classified in two groups: first, those due to a lack of anatomic knowledge, lack of surgical skill, or recklessness; and second, those unavoidable ones which can happen to anyone even to men well skilled in surgery. A few of the surgical accidents which sometimes occur are discussed in the following paragraphs.

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Opening the peritoneum and cutting the gut. I think that the method of opening the peritoneum is an important factor in avoiding injury to the intestine. My preference is for the knife rather than the scissors, as the gut may become caught between the blades of the latter and be snipped as they are closed, while with the knife, the peritoneum can be teased through while the gut is loose, and pushed away from the blade. Regardless of which method is used, care must be exercised, as the patient may suddenly strain and force the bowel into the course of the blade. In addition to this danger, if the gut is adherent to the parietal peritoneum, there is danger of cutting into it. I have nicked into a bowel twice in opening the peritoneum. If the bowel is nicked through, it should always be sutured at once.

Curettage. This is a comparatively simple procedure which most of us have performed in many country homes with impunity, yet there is danger of accidental perforation of the uterus, especially if the uterus is of the soft, boggy, or friable type. I saw this accident happen in the hands of one of the foremost gynecologists of his time, much to his discomfort, when he was operating before a group of medical men. The same accident happened in my work a number of years ago, after I had removed a large cervical polyp. I had started to curette the uterus for a hypertrophic endometritis and as the curet was pressed against the uterine wall I felt a pull on it and could feel the head against the abdominal wall. Fortunately this patient had an ovarian cyst on one side which was to be removed, so that when the abdomen was opened the small puncture in the uterus was easily closed. I know of two cases where perforation took place and part of the intestinal tract was curetted away with the consequent results.

Injuries to the bowel while working within the abdomen. These injuries most often occur while breaking up adhesions of long standing, such as are found in tuberculosis of the plastic variety, those due to pus tubes, and those due to neglected cases of ectopic pregnancy. Often on opening the abdomen for a partial obstruction, or occasionally a complete obstruction, one finds a conglomerate mass of bowel omentum, tubes, ovaries, etc., bound together with very dense adhesions, as well as some studding of the peritoneum. A loss of flexibility of the gut is noticed on manipulating the bowel. The tissues have so lost their flexibility that, when making an effort to break up the adhesions between the loops, one feels as though the gut will break in two. In order to relieve the intestinal stasis and aid in the healing of the tubercular process, both sides of the mesentery must be exposed. In other words, all adhesions must be broken up and the gut straightened. Not only does the gut feel as if it will break in two, but in some of these cases, it has become so friable that it is almost impossible to separate these dense adhesions without injury to the bowel. Of all the intra-abdominal conditions with which we have to contend, this is one place where it takes a surgical "prize fighter" to withstand the tedious manipulations with their associated accidents.

Here I might cite a case in my own experience which illustrates the above facts. On May 23, 1929, I operated on a patient for inguinal hernia and removed an adherent appendix through the hernial opening. The cecum was somewhat fixed, and the appendix was covered with dense adhesions and hard to remove. A good general examination of the abdomen could not be made through this opening. The patient seemed to be convalescing satisfactorily until we were about ready to let him leave the hospital, when he began to develop symptoms of partial obstruction. About this time I went to Colorado and on my return found that the men in charge had been having considerable difficulty in getting anything through his bowels. After an examination we decided to open the abdomen. This was done on June 24, 1929, a month after the first operation. We found that the whole intestinal tract in the lower abdomen was a conglomerate mass of bowel and adhesions, with some free fluid in the abdomen, and some slight studding of the peritoneum. Picking up the gut above the mass we started to release the gut and straighten it. The adhesions between the convex surfaces of the bowel could be clipped and separated with the scissors, but the mesenteric borders of the loops as well as the folds of the mesentery were involved in the adhesive process so that one could not follow these adhesions down with the scissors for fear of destroying the circulation to the gut. By careful separation with the tip of the finger and the use of the scissors, where possible, we started to dissect these adhesions. We had not gone far when, with a very slight pressure against the gut, my finger suddenly dropped into the lumen. An attempt was made to suture the opening but this was extremely difficult, due to our inability to make the suture hold in a gut which was so friable. We finally completed a poor closure, and again undertook to release and straighten the gut. After I had carefully followed along the bowel for some distance, the same accident occurred again. At this point we decided that we had released enough of the gut to allow the passage of fecal matter, and as the patient was not in a good condition, we discontinued the process, placed a number eighteen French catheter in the bowel above the obstruction,

inserted two Penrose tubes in the peritoneal cavity and closed the wound. This patient died thirty-six hours later.

Another case which might be cited in this connection was one of ruptured ectopic pregnancy with the formation of a very large hematocele. This patient had been bleeding for over four months and a large mass could be felt in the lower abdomen which extended upward to the level of the umbilicus. The abdomen was opened and the whole lower half was simply a mass. The adhesions were very firm and dense and the relation of the structures was markedly distorted. One hardly knew where to begin. Finally by following the sigmoid colon I was able to get my hand against the posterior wall of the uterus and left broad ligament. By following these surfaces upward I managed to release the gut from the uterus, bladder, left tube and ovary. A large mass of clotted blood was removed. An attempt was then made to separate the intestine from the right tube and ovary. After dissecting the intestine off the inner two-thirds of the right tube, I saw a slit about one inch in length in the long axis of the small bowel which had not been noticed at the time it occurred. The gut was immediately sutured, the left tube and ovary removed, drainage instituted and the abdomen closed. This same type of accident may occur in pus tubes of long standing, although I have had no personal experience with accidents of this type.

In connection with massive formation of adhesions it might be well to refresh our minds in regard to the difference in the circulation of the large and small intestine, and why we should be especially careful in handling the mesentery of the small bowel. As you are probably aware, the vessels that enter the small gut between the layers of the mesentery come off the vascular loops and enter the gut at right angles to its long axis. These little vessels supply the gut wall, each having its own segment which it nourishes. In the wall of the small intestine the collateral circulation between these segmental arteries is very poor, so that if they are injured near the mesenteric attachment of the gut, the collateral circulation cannot be depended upon to keep the bowel viable. In the large bowel the reverse is true, the wall having an extensive collateral circulation. Hence in the small intestine great care should be taken to protect the circulation because if it is injured, a resection superimposed upon some serious surgical procedure might be necessary which would mean the difference between life and death.

Accidents in gallbladder surgery. The two most feared accidents in gallbladder surgery are hemorrhages and injuries to the common duct. Especially is this true since the removal of the gallbladder has become so prevalent. In removing the gallbladder much of the bleeding that takes place can be controlled by first clamping the cystic duct and artery, and then cutting across them, removing the gallbladder from below, upward. The objection to this procedure is the increased danger of injuring the common duct, although it gives the operator a much clearer field in which to work. If the gallbladder is removed from above, downward, the bleeding is much more troublesome until the cystic artery is under control; but with the gallbladder and cystic duct swinging away from the liver, it is much easier to ligate the cystic duct, with less danger of injuring the common duct as the operator is better able to see the connection between the two. If the common duct is injured, some form of repair is indicated, such as simple suture, partial suture with T tube drainage, or some form of plastic operation. If the cystic artery, after being cut, happens to slip away from the forceps or a ligature, the hemorrhage is sometimes very severe unless the operator has a definite knowledge as to how to control it, and even then there are times when he has considerable trouble.

The best method with which I am familiar in this type of case is to slip a finger or two in the foramen of Winslow and pull forward. As a rule this will check the bleeding. The blood is then sucked or wiped away and the spurting cystic artery picked up. Those of you who have tried this procedure, know that even after the hemorrhage has been controlled it is often difficult to grasp the cystic artery. I recently had a case that illustrates what may happen. In removing a gallbladder I worked through under the cystic duct and artery with a curved clamp and then placed a long heavy curved clamp across them. This clamp was used because the abdomen was extremely fat and thick and I could reach the duct better with it. I then worked up under the gallbladder, separating it from the liver without cutting the cystic duct and artery. After the gallbladder was entirely free and I could see where to place the ligature, I handed the large forceps on the duct to my assistant as well as a smaller one which was on the fundus. Just as he took hold of the forceps he put a little extra traction on the larger forceps; the gallbladder came out of the abdomen and the cystic duct and artery tore off just below the posterior edge of the forceps. The blood flowed into the abdomen very rapidly. As quickly as possible I slipped a finger into the foramen of Winslow and soon had the hemorrhage under control. After removing the blood, I finally caught the artery and duct with forceps and succeeded in ligating them. The one thing I wish to emphasize is that in a case

of this kind, with a thick abdomen and the artery and duct retracted, this procedure can be extremely difficult. I am not able to place the blame for the accident since I do not know whether it was due to the large clamp crushing too severely on the duct and artery or the extra pull that was given the clamp. It might have been a combination of both.

Another mishap that sometimes occurs is that of cutting into the gallbladder when separating the peritoneal reflection in order to force a clamp beneath the cystic duct. As a rule this accident has no serious consequence unless there is frank pus in the gallbladder, since the peritoneum usually handles ordinary bile rather well. I have never had this happen to date but have seen it occur a number of times in the hands of excellent surgeons.

Another accident that might be mentioned in connection with gallbladder surgery is the breaking of a T tube when the surgeon attempts to remove it from the duct. I saw this particular thing happen to one of the foremost surgeons of America. He followed the fistulous tract with a forceps and was fortunate enough to be able to grasp the remainder of the tube and successfully remove it. However, this accident might necessitate the reopening of the abdomen to remove the remaining portion of the tube.

Sponges and instruments left in the abdomen. This is an accident that has given many surgeons grief and has cost many of them considerable money because the layman does not realize how easy it is to leave a sponge in the abdomen when the surgeon's attention is centered on some difficult surgical task, and often looks upon it as gross negligence. Many times I have seen excellent operators stuff the abdomen full of small sponges and depend on the count for their removal. Personally I never rely on the count entirely, as the nurse might make a mistake. I think if one uses long packs as a barrier to wall off the area in which he is working, and then if necessary uses his sponge packs on top of this barrier, there is much less danger of leaving a sponge. This also holds true in regard to instruments, although it is possible to lose instruments within the abdomen after the packs are removed. Especially is this true if the intestine interferes with the closure. This was demonstrated to me once when I was called upon to assist a surgeon in removing a large abdominal tumor. He had performed a hysterectomy about a year and a half or two years previous to that time, and because of difficulty in closing the abdomen had used a double shoe horn to keep back the intestine. When the abdomen was opened, a hard firm mass covered with adhesions was found in the left side. We were both at a loss as to what the mass was. After feeling and manipulating it a hard firm point could be felt at the lower end. There seemed to be no line of approach to the mass and finally the surgeon said, "Well, R. A., what would you do?" I again felt for the hard tip at the lower extremity and suggested that he take a knife and carefully nick down on this hard point. He did so and suddenly a metallic nose pushed itself into view. It was the double shoe horn and after some pulling and twisting, it was finally extracted. This operator made the statement to me afterwards that he had missed that instrument for about two years and had always wondered where it went. Suffice it to say that the tumor was non-malignant and never recurred.

Breast amputations. In performing breast amputations of a radical nature the most important accidents to be avoided are cutting the axillary vein, the cephalic vein, the external respiratory nerve of Bell, the subscapular nerves, and perforating the chest wall. All of these occasionally take place and vary as to consequences.

If the axillary vein is nicked, the edge may be picked up with a small forceps and the side of the vein ligated. If it is cut across, suture of the vein should be attempted. If the vein is entirely severed, moist gangrene of the arm usually takes place and amputation is later necessary. However, if the vein is severed below the cephalic vein entrance into the axillary, the cephalic vein may sometimes compensate for the injured axillary. I know of one instance where the axillary was severed and it was necessary to amputate the arm for gangrene.

Injury to the cephalic vein should be avoided if possible. This accident does not produce gangrene but it does leave the patient with a more or less chronic edema of the arm. Some operators have a tendency to ignore the cephalic vein, but they would have fewer swollen arms if it were given more consideration.

Severance of the external respiratory nerve of Bell should be avoided. An injury to some of the fibers produces few symptoms, but if the nerve is severed especially high on the chest wall the serratus magnus muscle becomes paralyzed, the motion on the side of the chest is deficient, and the patient suffers from a sense of respiratory oppression.

An attempt should be made not to injure the subscapular nerves, although there are no serious consequences if they are severed. The subscapularis, the teres major and latissimus dorsi muscles are paralyzed with some deficiency to the motion

of the shoulder, especially internal rotation, adduction and extension. The other muscles of the shoulder usually compensate well for this loss.

Perforation of the chest wall should be closed as rapidly as possible to prevent air entering the pleura with subsequent collapse of the lung.

Malignant ovarian cysts. We should carefully guard against spilling the contents of a malignant ovarian cyst into the peritoneal cavity, since malignant cells may become implanted in the peritoneum and produce secondary malignancy. In fact I think one should try as far as possible to avoid spilling the contents of any ovarian cyst into the abdomen, because although the gross appearance may appear to be benign; when the cyst is opened it may contain polypoid growths which on section, prove to be malignant. If the cyst is so large that it cannot be removed intact, a trochar should be inserted and as the cyst begins to collapse it should be grasped with the forceps. The opening should then be drawn outside the abdomen and to one side of the incision, so that as little fluid as possible enters the peritoneal cavity.

Irreducible intussusception. Occasionally we are called upon to operate on a child with an intussusception which has existed over a period of time and the gut is found to be dark, swollen and edematous, with the intussuscepted portion gangrenous. Reduction is almost impossible in this type of case and should not be attempted since there is nothing to be gained by it. The older method of handling some of these cases was that proposed by Jessett and Barker. The outer gut is cut through longitudinally, and the intussuscepted portion amputated within the outer gut. At present I think the method of Montgomery whereby the intussusception is short-circuited out of the gut tract by anastomosing the small bowel to the large, is the best procedure. A number of years ago when operating on one of these irreducibles with gangrene of the intussuscepted portion, I used the Jessett-Barker method. In this patient the distal ileum and cecum were pushed into the ascending colon reaching nearly to the hepatic flexure. I made a longitudinal incision in the outer gut and started to cut across the intussuscepted portion, expecting to put stay sutures through the two layers of the intussusceptum. I made one cut with the scissors and the ileum dropped out. This was grasped with a Carmalt forceps, laid to one side, and the amputation completed. The end of the ileum was closed and a lateral anastomosis completed between the ileum and the upper ascending colon. Fortunately the ileum had been so compressed that the wall remained agglutinated until we grasped the end with the forceps. This fact prevented a blowout at the end and a spill of intestinal contents. The point this case brings out, is that before an amputation of the inner gut is attempted, the intussuscipiens and the intussusceptum should be sutured at the line of invagination. This patient died in a few hours but I believe that the major cause of death was the delay in having an operation performed.

Injuries to the ureters. These generally occur during a hysterectomy for massive fibroids, or removing large parovarian cysts. In intraligamentous fibroids or cysts in the broad ligament one should make the incision in the broad ligament parallel to the course of the ureter because the danger of cutting across it is decreased. One usually thinks of the ureter as being posterior to these tumors, but occasionally the tumor lies posterior to the ureter and if one is not on his guard it is very easy to injure it. If the ureter is injured the three best methods of management are direct anastomosis, inplantation into the bladder or bowel, or ligation allowing the kidney to become a dead kidney. In this last instance one must be reasonably sure of a functional kidney on the other side. Resection of the colon is another procedure in which the ureter may be accidentally injured and the management just described should be followed.

Accidents occurring in thyriod surgery. These include injury to the recurrent laryngeal nerves, injury or removal of the parathyroids and injury to the trachea.

Injury to one or both recurrent laryngeal nerves is a most serious accident. Opinions differ as to the normal position of the nerves. One investigator may claim that the nerve lies directly in the groove between the trachea and esophagus, while another reports that the nerve occupies a more lateral position. Crile has said, "It is not its location but rather the vulnerability of its structure, the neighborhood changes of fixation and adhesions and certain characteristics of the nerve conduction that form the hazards." The slightest pressure, direct or indirect, on the recurrent laryngeal nerves interferes with nerve conduction and immediately changes the voice. These nerves are exceedingly sensitive and extremely delicate, and the current through them is easily blocked. The exceeding vulnerability of these nerves is the first and most important factor in production of abductor paralysis. Judd, New and Man, in experimental studies found that if the nerve was pinched with a hemostat there was at once a paralysis of the corresponding vocal cord, but that restoration of function occurred in from thirty to sixty days. Ligation and severance produced a complete permanent paralysis. Crile believed that abductor

paralysis was most frequently caused by traction. No definite rules can be laid down for the prevention of temporary or permanent paralysis, but strict adherence to certain principles will tend to minimize injuries to these delicate structures:

1. There should always be an adequate exposure.
2. The force used in bringing the superior thyroid vessels into view should be minimized.
3. Resection should always begin at the tracheal attachment of the gland and progress laterally.
4. The posteromesial portion of each lobe must be preserved.
5. The anesthetic is of extreme importance and must be light enough so the patient can be awakened within a few minutes. The anesthetic of choice is novocaine administered locally plus nitrous oxide or ethylene. Ether or chloroform should not be used.
6. The patient should be made to talk while the operator is working near the nerve.
7. Bleeding should be accurately controlled.
8. Rough pulling or handling should be avoided as it causes edema.

If one nerve is injured special care should be taken not to injure the nerve on the opposite side. The cord on the injured side dies, but as a rule the cord on the opposite side compensates for the paralyzed cord moderately well. Crotti claimed that injuries to these nerves occur in from seven to thirty-five per cent of the cases, and that the frequency of their occurrence varies directly with the conscientiousness with which routine laryngoscopic examinations are made.

Injury to the parathyroids, their removal or interference with their blood supply, are the causative factors in tetany following thyroidectomy. These glands usually lie in the posterior substance of the thyroid. As a rule in cases of tetany the symptoms develop within forty-eight hours after the operation. The prodromal symptoms are headache, general weakness, pains radiating down the extremities, twitching, and occasionally some stiffness of the fingers. The symptoms appear symmetrically and bilaterally and reach their greatest intensity about the third day. The facial muscles may be made to twitch by tapping along the facial nerve. Cases have been reported where death took place in three days but with present-day treatment, tetany seldom lasts longer than forty-eight hours. Excellent results are obtained by giving doses of four gms. of a ten per cent solution of calcium lactate every three hours, orally or rectally, or a five per cent solution subcutaneously. In severe contractures, Crile advocated using twenty c.c of a twenty-five per cent solution of magnesium sulphate. Parathyroid extract and Collip's serum are also valuable.

The trachea may be punctured if one is not careful in cutting away the gland when working close to the trachea. Especially is this true when removing the isthmus. I saw this happen once. The trachea was sutured but as I had no chance to follow the case postoperatively, I cannot report on the convalescence.

Breaking of a spinal needle. An accident which is somewhat distressing although not alarming is the breaking of a spinal needle while giving a spinal anesthetic. If the anesthesia has already been induced above the level of the needle puncture, no further anesthesia is necessary. If not, then a general or a second spinal anesthetic should be used. The point of entry of the needle should be marked by a slight transverse incision so as to be able to keep track of the interspace in which the needle lies. A longitudinal incision should then be made over the spinous processes of the vertebra. The aponeurosis over the erector spinae muscles on each side of the spine is incised, the muscles separated well down to the laminae and a little outward and held with retractors. On digital palpation the needle can usually be located, grasped and removed with forceps.

One could hardly discuss surgical accidents without mention of the accidents that may happen to the surgeon and his team of co-workers. Septic infection is the dread of every man engaged in the practice of surgery. Sometimes an operator pricks his own finger or that of an assistant with a needle and has disastrous results. Another incident which may occur is the contraction of syphilis while operating in the presence of lues. It is not impossible for some member of the operating team to be overcome with the anesthetic fumes. This may seem rather far fetched to some of you but it actually occurred with us about two years ago while using ethylene.

I realize that this paper is far from complete but I have tried to emphasize the most important points in some of the more common accidents of surgery.

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Discussion

Dr. William Jepson, Sioux City: The question under consideration is that of surgical accidents. Many of them were most excellently presented to us. There are a great many others that can happen to a surgeon in the field of his activity which, of course, by reason of time, cannot be mentioned.

The matter of incising the intestine in the process of opening the peritoneum is one that should not happen often. In fact, in my opinion, there is no excuse for it occurring at all unless the intestine is adhering underneath the site at which the peritoneum is being opened. When it does happen the most important thing is for the surgeon to realize what he has done, close the opening, and not permit it to pass out of the field of vision into the abdominal cavity, since if it does it will most surely leak and, in consequence, give rise to a fatal result.

The next important accident that can happen to the surgeon while working within the abdominal cavity, especially if he is dealing with an inflammatory or neoplastic process, is that of accidentally opening the intestinal tract. The surest way of avoiding that is not to break up any adhesion that is not necessary, and, as a rule, that is true in the instance of a tubercular peritonitis and certainly true of a carcinoma. If you should be operating in the region of an obstruction, the only reason for breaking up an adhesion would be to give the patient temporary relief through proper enterostomy. However, in removing a neoplasm, or any obstruction, such as a fallopian tube, such accidents can and do happen. If you want to avoid these accidents as much as possible, train your finger so that it recognizes the various tissues by touch. Train it until it has the same skill that the finger of a blind man has in reading letters. You will not be able to acquire this touch by reading about it, and until you have accomplished it to a certain degree, you cannot say that you are more accomplished in the abdominal cavity than a man who attempts to play a violin because he has read about it. That proficiency comes only through practice.

Three weeks ago I was operating on a patient with an inflamed gallbladder. The duodenum was carefully separated, turned over to the left side, a bit of gauze placed over it, and it was held aside by a retractor. In some way the retractor slipped slightly and tore the duodenum wide open. To my surprise the repair did not leak, in spite of the fact that it was accomplished through soft tissue.

I will refer to just one other instance that shows you to what extremes one may be placed. Many, many years ago, when I first entered upon the practice of surgery, in removing an infected tube, I removed—well, I will state it this way—when I finished there was a rip in the rectum about three inches long, and about an inch or inch and one-half wide. What could I do? I certainly could not suture it. I went to work and planted in it, the posterior wall of the uterus, which forever after constituted part of her rectal wall. She made an uneventful recovery. You sometimes have to make use of the organs.

In regard to accidental injuries to the common duct, I think well of all the excellent points brought forth by the essayists, except that I do not think it is often necessary to suture that opening. In other words, we often open the common duct to remove stones. If we bring a small draining tube with gauze packing around it, down by the side of the duct, and see that we have drainage, we will not need to worry about the small opening we have made, and we are less likely to have a subsequent occlusion.

Dr. Erwin von Graff, Iowa City: We should be very grateful for the paper by Dr. McCauliff because it is certainly true that we can improve our results by reporting our failures. If a man speaks about his brilliant results without mentioning the accidents, one is likely to be suspicious about his reliability.

We can learn only by reporting our accidents, and this is especially true for the rupture of wounds following abdominal operations. We must admit that we do not know why wounds occasionally rupture. I have seen five cases during the past two years. There are certainly many different reasons which help to produce this accident. The point which Dr. McCauliff stresses, that is, the injury of the muscle, cannot be such an important reason, because in the five cases I have seen, the incision did not even touch a muscle. In four cases the operation was of unusually long duration; in one case, the patient was epileptic and had a severe spell of cramps and convulsions the second day after operation. In four cases, furthermore, the course was febrile, and that leads to the old idea that infection may be the main reason. It is remarkable, however, that in all the cases the peritoneum was found perfectly clear and, as a rule, the patients in cases of rupture recover without any trouble. We have lost only one patient because of thrombophlebitis and embolism in the lung. Without exception the most amazing fact encountered is the absolute absence of any healing tendency. There is not the slightest attempt of the tissues to unite. I feel that the main reason may be some unknown temporary absence of the healing reaction of the tissues, caused either by the individual's disposition or by some complication, such as infection, distention, weakness or loss of blood.

It is certainly desirable to report all such cases in order to succeed finally in finding the real reason for rupture of wounds following abdominal operations and how such accidents may be avoided.

Dr. Becker, closing: There are just a few points brought out in the discussion that I wish to consider.

Dr. Jepson said that there is very little excuse for cutting the gut when opening the peritoneum. This is true unless it is adherent to the parietal peritoneum. If so one gets into trouble due to the inability of the operator to distinguish the line of cleavage between the visceral and parietal peritoneum.

I agree with Dr. Jepson in regard to the necessity of breaking up adhesions. I think we have all made mistakes by trying to do too much in the way of breaking up adhesions within the abdomen. If the adhesions are not producing obstructive symptoms or some other definite damage they should not be disturbed, because if they are broken up we have no assurance that they will not recur, probably in a worse form than existed primarily.

I agree with Dr. Jepson's statement that the easiest way to avoid injury to the uterus is to stay out of it. I think there are a great many unnecessary currettements. However, there are conditions where curettage is definitely indicated and should be done. In writing on perforation of the uterus my idea was to point out the possible danger of using the curet.

Whether you suture the common duct, or place a drain down to the duct when it is injured, depends on the extent to which the duct is injured.

As Dr. Junger said, our technic should be as simple as possible, but in most instances it is necessary to use a certain amount of packing when working within the abdomen. The secret of the success of our surgical work is simplicity.

Personally I have never made much of an attempt to be a speed king. I do not believe in opening into the peritoneum with one stroke of the knife and I do not believe in slashing in under the gallbladder with a knife so that a curved clamp can be placed across the duct. I believe in working carefully. I would prefer to have a careful, thinking surgeon operate on me who takes time to think as he goes.

I feel that our success depends to a marked degree on the way we handle tissues. We should not go into the abdomen and maul the gut around in a haphazard way but should systematize our operative work and handle the bowel as though it was a real, living, human intestine, and not as though it was made of iron.

I have had three cases of postoperative separation of the abdominal wound such as Dr. McCauliff describes in his paper. Two of these were in extremely fat individuals and I have never been able to explain the cause. They were sutured just as I have always sutured the abdomen, in a manner similar to Dr. McCauliff's technic, except that I do not put the retention sutures through the peritoneum. I put them through the skin and rectus sheath. The third case developed erysipelas and I think this was probably the causative factor. I have given a lot of thought to this subject and believe that after thorough investigation we will find there is an underlying systemic dyscrasia of some kind.

THE "RATIONAL VIEWPOINT" IN OUR PRACTICE*

HAROLD J. MCCOY, M.D., Des Moines

Gentlemen and fellow members of our section of the Iowa State Medical Society:

As chairman I have deliberated considerably upon what to say to you. The following remarks represent some of the many thoughts that have come to my mind:

The "rational viewpoint'" in our practice is as the title signifies, the method of procedure that gives the best possible results in alleviating the suffering of the patient. We must recognize conditions that cannot be remedied as well as those that can be.

Medical science is a study and observation of man; the processes of life, the origin, structural anatomy, physiologic and pathologic processes. A book of the accepted, known facts of medical science would be very small compared to a book of the incomplete knowledge. We are studying natural processes. Therefore, we should adhere closely to nature and I believe that by so doing our administrations to the sick will be far more effective and generally accepted.

Modern medicine has done much to aid civilization in preventing disease, alleviating suffering and prolonging life. As practitioners of medicine we have much to talk about and much to learn, but if we keep in mind one single purpose, that of helping our patient, and if we cooperate with one another, we can be of inestimable value to society and this value will be fully recognized.

The source of modern medicine, as Sir Andrew MacPhail of McGill University tells us, "was" about 1686, the year in which Charles II died. His reign marks the watershed between the mediaeval and the modern world, between the mass and the individual, between authority and experience and between books and experiments. From that summit, the spring of modern medicine burst forth.

Up to that time the authority in science was Aristotle; in philosophy, Thomas; in medicine, Galen. We pass from the closely organized and enslaved thought and knowledge, to freedom of thought and knowledge. Freedom has its perils, however, for now one can say what he likes, even in medicine, no matter how foolish, but there will be plenty to contradict him. The first man to deliver us from the divine right of Galen in medicine was Thomas Sydenham.

Look, for instance, at the bedside of Charles II. He was bled, scarified, cupped, his head shaved and blistered, and an emetic, a clyster and two pills

* Address of the Chairman, Section on Ophthalmology, Otology and Rhinolaryngology, Eighty-second Annual Session, Iowa State Medical Society, Des Moines, May 10, 11, 12, 1933.

were given. During the next eight days, fifty-seven drugs were prescribed, and toward the end a cordial containing forty more. Charles grew worse, and so they tried goatstone, which was a calculus obtained from a species of Indian goat; and finally the distillate of a human skull was given. Many physicians were called in and only one protested that they would kill the king. He died peaceably.

Thomas Sydenham, who lived but a few blocks away from the bedside of Charles II, was not called, for he was a Puritan, and was reputed to be practicing medicine in a new way. His method was no secret, for he wrote of his observations. The Royal College of Physicians in 1810 placed a mural tablet on his grave bearing the inscription, "A physician famous for all time."

Sydenham thought of each disease separately, studied closely the manifestations of disease, and the evident and associated causes. He discriminated between acute and chronic diseases. The former he considered to be an "Act of God," a reaction of the body to meet some injurious influence coming from without; while chronic disease was mainly due to errors in diet and in the general way of life, the patient himself being the author.

Sydenham considered that fever was nature's engine to destroy septic material in the blood. Why do we today became alarmed about fever? Which is worse, a sick patient with fever or one without fever? Here, again, we should consider the patient's condition, and use the best judgment that experience has taught us. There are significant features about fevers in our practice. A patient with a sick ear and a prolonged course of fever of a spike nature, associated with or without chills, makes us think of a phlebitis of a large vessel about the ear, sinus thrombosis.

Sydenham wrote, "Study the actual disease with an open mind, make an unbiased study of the natural process in health and disease and trust in the healing powers of nature—for nature is the mother and healer of us all—and provide help only when help is demanded."

We do not have to imagine or to think out what nature does; rather we have to discover what she does. As Hunter said to Jenner in his observation of milkmaids and their immunity to cowpox, "Do not think—try!" From that command came vaccination for smallpox.

Sydenham's contribution to medical diagnosis was not so great, although he described the difference between chorea and St. Vitus dance. He described syphilis and recognized many diseases as specific in the modern sense, e. g., hysteria and gout. The latter disease was the cause of his death and he said, "Fools rarely suffer from it unless I myself am an exception." It was in the practice of medicine that he excelled. He prescribed roast chicken and wine for weakness, and horseback riding for exercise to restore health. He possessed the humanitarian spirit of rendering service to mankind. He created no great stir in London. He had both friends and enemies among the faculties of the London medical colleges. However, skepticism in regard to medical procedures should not be too severely blamed, for too often we find out later that we were right in refusing to accept the new idea or believe too thoroughly in the so-called established ideas and procedures of practice.

The art of the practice of medicine should not be overlooked nor should the fundamentals in the study of medicine be neglected, such as the dissection of the human body, observation of the sick, and the careful study of the patient's history.

In our present-day course in medicine, when a student is converted into a physiologist, a physicist, a chemist, a biologist, a pharmacologist and an electrician, there is no time to make a physician of him. That consummation can only come after he has gone out into the world of sickness and suffering, unless indeed his mind is so bemused, his instincts so dulled, his sympathy so blunted by the long process of education in those sciences, that he is forever excluded from the art of medicine, which was to Hippocrates "the art of all arts." In that case he is destined for the laboratory, the professor's chair or the consultant's office.

Pitcairne, like Sydenham, insisted upon the strictly scientific method long since enunciated by Bacon; an exact compliance with observation and experience. He felt that a physician ought to apply himself to discover by experience the effects of medicine and disease and not needlessly fatigue himself by inquiring into their causes, which it is neither possible nor necessary to know. Nature lies concealed and will always be concealed; the more we seek, the further she recedes. Pitcairne and Sydenham believed nature knew no law, that the laws of nature were merely our own presuppositions.

These men might have carried this idea of the useless studying of nature's cause of our physical troubles too far, yet how true it is today that the individual characteristics, the susceptibility of certain people to certain diseases or ailments, and the cause of disease, except in a few cases where specific bacteria are the known cause, are still concealed by nature, and we are obliged to recognize the disorder and treat symptoms only in so many instances. In due course of time our patient "gets well" or is unsuccessful in his fight for life and health. If we could only know more of this un-

known, how much happier we could be in our work. The least we can do is to work hard with an open mind, be fair with ourselves as well as with our patients, remembering there is no authority in medicine like experience and individual study. The drug houses, research laboratories or instrument makers cannot make physicians of us.

Now for some reflections into our specialty. In the common procedure of fitting glasses to relieve people of headaches, it is very important to determine from a medical survey the cause of the headache, its type, frequency, and duration. The degree of error has little to do with the benefit the patient may derive from wearing glasses. The fact remains that many glasses are fitted and worn for a few weeks and then discarded for years. It is self-evident, then, that we should use care in prescribing glasses.

Phoria is another thing about which little is known. We have been hearing papers on phorias, ocular muscle imbalance and the results obtained from the occlusion test for the past few years, but the sum of all such information is not generally accepted by oculists. When a hyperphoria definitely exists, it is well to correct it if there is nothing in the general medical examination that first needs correction. In all phorias it is important to correct the error of refraction as accurately as possible, bringing out the maximum visual acuity. So far as methods of refraction are concerned, whether performed with or without a mydriatic, the refractionist must study the case at hand and, in order to get the best results, use that method in which he is most skilled.

As a rule squints in this country are neglected by the "old-timers" in our practice, except for the fitting of glasses. Muscle operations as well as muscle exercises have their place in the treatment of this condition but with knowledge so vague as to the definite etiology it is wise to study the case thoroughly and plan a great deal of follow-up treatment in order to get results when muscle operations are performed. Some muscle operations, even on an amblyopic eye, will correct the deformity very nicely, while at other times all operations and treatments are unsatisfactory.

Diseases of the eye seldom come from sinus disease, yet here again no law can be laid down, for the exceptions overrule, if experience and study are thorough and sufficient in scope.

Dacryocystitis, causing occlusion of the nasolacrimal duct that becomes permanent and needs surgical attention, apparently can be handled by various operations, depending upon the operator. The results are all about alike. In my personal experience, removal of the sac has worked well where surgical intervention was indicated.

The nose, twenty years ago, furnished a fertile field for surgery, and much was done in the way of submucous resection, removing, trimming and cauterizing turbinates, and exenteration of the ethmoidal labyrinth. It was so generally indulged in, with poor results, that the public and even the general practitioner became shy, and discredited nasal surgery to such an extent that even worthy nasal surgery was refused. There is a great deal of benefit to be derived from certain operations when definite indications exist. It is our duty to reëstablish the value of nasal surgery, and thus restore the public faith.

Our ears are for us to hear with and through them we gain much knowledge. From early childhood affections occur in most of us that lower the acuity of hearing as age progresses. The rate of the reduction is an individual factor and may affect both ears alike or one ear more than the other. The infections and inflammations of the middle ear seem to have little influence on this course of lowered acuity. However, we are obliged to care for many abscessed middle ears with a few complications, such as mastoiditis, meningitis, phlebitis and labyrinthitis. It is a problem to know just what to do in some of these cases of acute otitis media. Some otologists and pediatricians open at the first sight of a bulging ear drum caused by acute otitis media and I believe this is the general rule. A few of us, however, wait for certain indications, such as constant pain or fever otherwise unaccounted for, or intermittent pain and fever over a period of a few days. I feel perfectly safe in waiting for self-opening or resolution, for I have the utmost faith in nature.

Regarding the mastoid complication, again I feel that rushing in early and performing a mastoidectomy is accompanied by greater danger than waiting for nature to wall off the infective process well. We must be able to judge from symptoms and other findings, just the degree of pathology present and when it is ripe; we must not wait too long or interfere too soon; then give nature our aid and remove what we can of the diseased tissue. If we then clean out the diseased area thoroughly, I believe our work will be followed by much more satisfactory results. I wish to leave one thought with you on this subject and that is, that early in the infective process when the bacteria are making their invasion, there is slight hope of preventing complications or stopping the invasion by early surgical interference. There are few exceptions to this, I believe.

The throat with the ever-growing tonsils furnishes us with many troubles. It is always a question in the individual case, whether or not the tonsils should be removed; and if removed, by

what method, enucleation or coagulation. A good medical history is of great value and if definite indications are present for removal, I feel we had better do a clean enucleation.

Ulcers of the throat should demand a careful study for they may be simple Vincent's, leutic, tuberculous or carcinomatous. A history and some laboratory work will help make the diagnosis.

Laryngeal disorders are not so numerous, although tuberculosis, lues, paralysis and tumors do occur. The latter in the cancerous age may be malignant. A biopsy should be done and a negative report should be discounted if clinical signs, such as early recurrence of the tumor on the anterior one-third of the cord, are present. Good reports from early removal by laryngofissure are more and more numerous.

Foreign bodies in the bronchi should not be mistaken for acute bronchitis, lung abscesses or pneumonia. A thorough history of the case, the proper use of the fluoroscope, and the proper taking of x-ray photographs, will make the diagnosis fairly certain.

Another very important duty to our patients is the proper charging for services rendered. I believe we should establish a basis of "value received," and the ability of the patient to pay. It is also wrong to charge low fees per call and then make more than the required number of calls, in which case the patient pays more for his disability than if a good fee is charged for each call or examination. More time should be left for study and recreation for the physician.

PROGRESS OF WOMEN IN MEDICINE*

Emma M. Ackerman, M.D., Sioux City

It is indeed a pleasure to meet with this group, and although my appearances at our annual sessions have been few, I have regretted missing those I could not attend. My contact with women in the profession has meant more to me than you can possibly realize; we need one another for inspiration. My experience of twenty years in medicine, has been that of one woman among a group of men. This group has been very loyal to me, but I have missed the contact with professional women, except as a medical student and interne. As an interne there were five of us at the Mary Thompson Hospital. In my community and in our hospitals, I have always been recognized equally with the men, in the matter of holding staff office positions, etc. The need for men physicians is obvious, but I feel that there is a definite place for women in the field of medicine, since frequently the ideas of the man and woman physician will complement each other.

This is the Thirty-sixth Annual Meeting of this organization. When I look back and attempt to visualize the paths which our predecessors trod, it appalls me. It reminds one of the pioneer days of our forefathers in a new land; their struggles and trials left us a heritage of material wealth. In like manner our professional pioneers left us a heritage of accomplishments, opportunities, and ideals. It might be of interest to make a brief survey of woman's progress in medicine.

In going over the literature, I find that in the early Greek period women were considered experts in the "healing arts." Men would not interest themselves in the sick and wounded. There were women practitioners in Italy, Egypt, and Asia Minor; and in the pages of Hippocrates, Galen, and Pliny, mention is made of many women who distinguished themselves in the care of the sick.

Due to the influence of Fabiola, a Roman lady, the first hospital was erected, a noble structure in Ostia, at the mouth of the Tiber, then the portal of entry to the capital of the Roman Empire. Her efforts at healing were highly respected. With the fall of the Roman Empire, and throughout the Middle Ages, the sick were cared for by monks and nuns. Women in many parts of Europe were far better educated than men and to them was given the treatment and care of the sick.

During the eleventh century, Trotula, a woman, was graduated from the medical school in Salerno, Italy, the only co-educational medical school in existence until the last century. She held a professorship at this university, and was the author of many works on medicine which were used by practitioners at that time. Manuscript copies of her works are still found in various libraries of Europe. She also had ability as a surgeon.

In 1292 there were eight women doctors in Paris, and others throughout France, whose names have been handed down to us. Conditions for studying and practicing were not as favorable in France as in Italy, and no schools were open to women. They thus had to depend upon practicing physicians and their own medical reading and experiences for their knowledge. At that time in France only a faculty member was allowed to practice medicine, and he must be a single man. Jacobe Felicie, woman of noble birth, had won distinction by her success, but was severely prosecuted and punished. In 1870, Miss Elizabeth Garrett, an English woman, and in 1871, Miss Mary Putnam, of New York, received their medical degrees from the University of France, the first women to be graduated from this institution. Miss Augusta Klumpke of San Francisco, an

*President's Address, State Society of Iowa Medical Women. Thirty-sixth Annual Meeting, Des Moines, May 10, 1933.

American, was the first woman permitted to practice in Paris hospitals.

Until more recent years little was said of women physicians in England and Germany. Their practice was chiefly midwifery, since no provision was made for their education in medicine and surgery. In 1754, the first woman in Germany received the degree of doctor of medicine, Frau Dorothea Christin Erleben. When the University of Salerno was closed, a school of medicine and surgery was established by Frederick II at the University of Bologna in Naples. For the first time women were admitted on an equal footing with men, and given the same opportunities and privileges. From this school Maria dalle Donne received her medical degree and because of her unusual ability was soon placed in charge of the city's school for midwives. When Napoleon in 1802 passed through Bologna, he was so impressed by her exceptional ability that he recommended the institution of a chair of obstetrics with Maria dalle Donne in charge. This position she held until her death in 1842. Soon after her death there was a movement for the higher education for women throughout Europe and America, and women practitioners began to appear in all parts of the civilized world. Seven years after her death Elizabeth Blackwell decided to enter medical college. We all know the difficulties she encountered in gaining admittance and the stupendous obstacles placed in her path. She was graduated with honors and the fact caused great comment in Europe and in the United States. Dr. Blackwell began the practice of medicine in New York City. She continued steadily, gaining the confidence and sympathetic cooperation of both men and women in society and in public life, and in 1854 started a free dispensary for women. Three years later she established a hospital for women and children. In 1869, the pioneer medical work by women in America was completed. During the twenty years following the graduation of the first woman physician, their public recognition has gradually increased, and today we enter the medical colleges in most of our schools of higher learning on an equal rating with the men. Some hospitals it is true, do not admit women as internes or staff members, but gradually, we trust, this barrier too will be overcome.

Great Britain held out against women in medicine for a longer period and only after a protracted and bitter fight did she surrender. The pioneer woman, Miss Sophia JexBlake, experienced far more difficulty in securing her medical education than did Dr. Blackwell. Our American women were treated courteously, while the English women were mobbed.

With that period, you and I are more closely related. We have come in contact with other professional women who have appealed to us in their struggles for a place in their chosen profession. Those women like Elizabeth and Emily Blackwell and Mary Putnam Jacobi have cleared the paths, so that you and I, and many others could be as well trained as our brothers. Nor should we fail to mention such a woman as Marie E. Zakrzewska, who, with her associates, were capable of building such hospitals as the New England Women's and Children's Hospital, and the New York Infirmary. The first Women's Medical College for our teaching and research problems was founded by their efforts; our women are keeping pace in scientific research, child welfare work, and in various other fields. I will mention only a few; there are others whom you know. Madame Curie, and her marvelous discovery of radium; Gladys Dick with her experiments in diphtheria prevention; Dr. Josephine Baker in child welfare work; Dr. Tracy as dean of our own medical school; Dr. Estelle Ford Warner, a recently appointed surgeon in the United States Public Health Service, the first of our sex to be appointed to such a position; Dr. Rosalie Morton, a gynecologist and lecturer; Dr. Rachelle Yarros, of social hygiene fame, who is prominently connected with the Birth Control Service; and Dr. Bertha VanHoosen, the most internationally recognized woman surgeon.

I recall so well Dr. VanHoosen's joy over the competitive examination at the Cook County Hospital which admitted her to the teaching staff. Time prohibits mention of many more names, but it is with great pride that one sees the recognition which our women physicians have justly received. Responsible positions as instructors, executives and leaders have been entrusted to them. We are happy to have women on our general programs in the state meeting and pleased that we today have been so favored in having Dr. Drips of Rochester. One is indeed thrilled by the thought that the tiny seed sown by these pioneer women has reached maturity and has borne such fruit as is exemplified by the women physicians of today.

NEW CHILD WELFARE STATION

The Hopewell home of Col. and Mrs. Charles A. Lindbergh, will become a welfare center for needy children, according to recent press announcements. It will be known as "High Field," and its object as stated in the corporation papers is "to provide for the welfare of children, including their education, training, hospitalization, or other purposes, without discrimination in regard to race or creed."

State Health Commissioner's Page

D. C. Stoolman, M.D.

LAW ENFORCEMENT DIVISION

IOWA STATE DEPARTMENT OF HEALTH

Quack doctors have been driven from the practice of medicine in the state of Iowa in the last four years—some have been enjoined, some fined and some jailed; medical ethics have attained a higher standard, and the illegal use of the prefix "Dr." has practically disappeared. It therefore, may now be assumed that the amendment to the general regulations of the Practice Acts establishing an inspection division in connection with the State Department of Health has proved a success. Iowa ranks relatively high among all states in its freedom from "fakers" and "charlatans" who seek to edge their way into the medical profession, thereby imposing upon and defrauding the public. The inspectors have used much tact and diplomacy in investigating complaints coming to the Department, as many unwarranted complaints are lodged against practitioners of the healing art. Unjustified complaints of this character, caused by cranks or competitors are analyzed very carefully so as not to give undue publicity, or cause injury to professional reputations.

During the four years the Law Enforcement Division has functioned, approximately 750 complaints of illegal practice have been received by the Division, of which upon investigation, more than one-third showed no law violation. About 500 violations were discovered, of which approximately 400 were corrected without the necessity of criminal or other prosecution. Types of violations range from the masseuse treating ills to the proletariat practicing surgery on mankind. Many of the complaints received were those of improper advertising, abortion, attempted abortion, aiding the illegal practitioner, ambulance chasing, fraud and deceit, malpractice, unethical conduct, drunkenness and narcotic violations. The inspectors have had full cooperation of the Attorney General's office, so that the work has functioned exceedingly well, and of the criminal investigations made in the last two years, 27 cases have resulted in either conviction, revocation of license, or indictment. Some cases are now pending in the courts. Some of the cases acted upon which involved state-wide attention and which affected the interests of the medical profession as well as the public, are as follows:

A. D. Harmon of Kansas City, Missouri, field agent for the Superior Medicine Company of Kansas City, Missouri, secured agents for county rights in the sale of a medicine cabinet containing first aid articles and an assortment of eighteen remedies. A manual was furnished with each cabinet describing common ailments, permitting self diagnosis and treatment. The buyers would either purchase a cabinet or a "county right." Those obtaining county rights to sell others within the county, would give cash and notes for same. Many people in and around Webster City and Clarinda were mulcted out of large sums of money. The Law Enforcement Division was instrumental in having returned in one case, cash in the sum of $1,500.00, and notes amounting to about $5,000.00, which had been received from various persons for territory rights.

Genevieve Stoddard, D.O., Waukon, Iowa. On March 3, 1932, the District Court of Allamakee County granted the state an injunction restraining Dr. Stoddard from prescribing internal curative medicines. It was appealed to the Supreme Court by the defendant, and affirmed.

W. H. McPheeters, D.O., Des Moines. The state brought an injunction restraining him from practicing medicine and surgery without a license. McPheeters had practiced and specialized in ambulant proctology. The state contended that this was major surgery and internal medicine. On August 19, 1932, hearing was had before Judge F. S. Shankland, Judge of the District Court of Polk County. At the conclusion of the testimony, the court found for the defendant, and dismissed plaintiff's petition. The state appealed the case to the Supreme Court of Iowa, and on June 20, 1933, an opinion was filed by said court, reversing the decision of Judge F. S. Shankland, and ordered that an injunction be issued in accordance with the opinion, restraining Dr. McPheeters from practicing medicine without a license. As osteopaths in general have contended that the administration of medicines hypodermically was not "giving internal curative medicines," this opinion is significant, as the Supreme Court said: "In modern practice, the internal curative medicine is frequently administered to the patient, not through the mouth, but into another part of the body by the use of the hypodermic needle, or by some other process."

Space will not permit relating the many more important cases, such as "Baker Institute case," "Bailey Dental case of Des Moines," the "Quigley case" (suggestive therapeutics of Leon, Iowa), the "D. M. Michael, Indian" or "Grey Wolf" case of Waterloo, the "Kindy Optical case" of Minneapolis and Des Moines, and others that were brought to successful conclusions.

PREVALENCE OF DISEASE

	May '33	Apr. '33	May '32	Most Cases Reported from
Diphtheria	29	43	39	Polk, Woodbury
Scarlet Fever	104	140	158	Polk, Mitchell
Typhoid Fever	6	1	12	(For State)
Smallpox	104	71	119	Linn, Dubuque
Measles	319	115	21	Pottawattamie, Mills
Whooping Cough	70	53	70	Woodbury, Buchanan
Cerebrospinal Meningitis	4	10	3	Woodbury
Chickenpox	185	179	136	Story, Woodbury
Mumps	414	391	126	Des Moines Blk. Hawk
Poliomyelitis	0	0	0	
Tuberculosis	46	34	55	Linn
Undulant Fever	18	23	5	Pottawattamie
Syphilis	188	198	172	(For State)
Gonorrhea	176	150	228	(For State)

The JOURNAL of the Iowa State Medical Society
ISSUED MONTHLY

RALPH R. SIMMONS, Editor.....Des Moines

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Vol. XXIII JULY, 1933 No. 7

WALLACE SUBMITS REVISION OF FOOD AND DRUGS ACT

As a result of an educational campaign waged by organized medicine for a period of nearly twenty years, the National Food and Drug Act, commonly known as the Pure Food Law, was enacted in June of 1906 and became effective the first of the following year. Drafted with full knowledge of the serious damage to the health of the public at large resulting from self-medication with patented concoctions of secret formulae and flagrantly deceptive therapeutic claims, the National Food and Drug Act required (1) that the names and quantities of any of eleven injurious or habit forming drugs and their derivatives named in the Act be declared and (2) that false, misleading or fraudulent statements be barred from the trade package. The Act marked a definite milestone in the development of a public consciousness in civic responsibility in health matters which has been so far reaching that no one can properly evaluate its worth. Not only has life and health been safeguarded but the working of this law has made other less obviously beneficial public health legislation possible.

In spite of some amendments to the original Act, which have more clearly defined the exact scope of its activities, the law is not perfect and evasion through channels not covered in the wording of the Act are in many instances operating to defeat the spirit of the Act.

Declaring that nearly twenty-seven years' experience in the enforcement of the national pure food and drug law has disclosed serious deficiencies in its provisions, the Secretary of Agriculture, Henry A. Wallace, by direction of President Roosevelt, submitted to Senator Ellison D. Smith and to Representative Marvin Jones, chairmen respectively of the Senate Committee on Agriculture and Forestry and the House Committee on Agriculture, a bill designed to supplant the present federal food and drugs act.

The new bill has been approved by the Department of Justice.

Among the provisions of the new draft are clauses giving the Government authority to prevent false advertising of foods, drugs and cosmetics and to establish tolerance for added poisons in foods. Other provisions include a section which brings cosmetics within the jurisdiction of officials enforcing the food and drugs act and which authorize the Secretary of Agriculture to promulgate definitions and standards for foods which will have the force and effect of law. Power to require manufacturers to procure in certain cases federal permits is also granted the Government, under the new draft, as is the authority to control drug products on the basis of therapeutic claims which are contrary to the general agreement of medical opinion. Another important section of the bill is a requirement for more informative labeling of foods and drugs.

Designed to protect the public against harmful or deceptively labeled foods and drugs, Secretary Wallace believes that the limitations of the present food and drugs act are such as to make impossible the achievement of this purpose. Seven of the outstanding and most significant provisions of the proposed new food and drug law are briefly outlined in the Secretary's letter to the committee chairmen.

"(1) The prevention of false advertising. The need for the control of serious abuses in this field is generally recognized.

"(2) The inclusion of cosmetics. Serious injuries have occurred through the sale and use of cosmetic products of a character harmful to the user. The practice of deceptive labeling and advertising of such products should be regulated.

"(3) The establishment of tolerances for added poisons in foods. A complete elimination of all poisonous substances from foods may be impossible. Where the presence of poisons is unavoidable, their amounts should be kept so low that by no possibility will the food be harmful to health. The present law contains no provision authorizing the establishment of tolerances for poisons, but imposes upon the government the obligation of showing affirmatively in every case that a food containing poisonous substances may be harmful to health independent of similar adulterations prevailing extensively in other foods.

"(4) Authority for the Secretary, after notice and hearing, to promulgate definitions and standards for foods which will have the force and effect of law. Under the present law such authority extends to the field of canned foods only. Legal food standards like those now existing for official drug products are essential for efficient enforcement operations.

"(5) Power to require manufacturers to procure in certain cases federal permits. This method of regulation will be invoked in those instances only where a menace to health is involved and where adequate protection to the public cannot be effected through the other provisions of the bill.

"(6) The control of drug products on the basis of therapeutic claims which are contrary to the general agreement of medical opinion. This removes the burden imposed by the present law of proving not only that such statements are false but that they

were made with fraudulent intent on the part of the manufacturer. This has seriously handicapped the department in the extension of adequate protection to the public in the purchase of drugs labeled as treatments for various diseases.

"(7) Requirement of informative labels. With one or two minor exceptions the present food and drugs act contains no positive labeling requirement. It merely prohibits false or misleading statements and these prohibitions are to some extent minimized by excepting provisos. A disclosure on the label of sufficient facts to enable intelligent and discriminating buying will operate unquestionably to the advantage of the consumer.

Secretary Wallace is to be commended upon his stand for greater security in the preservation of public health through the extension of the powers of the Federal Food and Drug Administration. They have proved their ability and have repeatedly called attention to their hardships under the existing law.

It is to be hoped that section (1) "The prevention of false advertising" may be so worded that not only the claims on the trade package may be kept within due bounds but that fraudulent and misleading therapeutic claims may not be made in any other fashion. It should be particularly and specifically worded to include billboard, newspaper, and magazine advertising and that newest and perhaps most powerful means of advertising—the radio.

The fact that the patent medicine exploiter still flourishes and in many instances possesses money with which to fight legislation which may curb his nefarious practices, indicates that the new proposal of a modified and extended power in this Act will not be passed without effort. Nevertheless, no thoughtful and informed citizen, particularly the physician so vitally interested in the public health and welfare, can fail to see in the proposed Act, virtues demanded by the public safety and in keeping with the modern methods of honest merchandising.

SPEAKERS BUREAU ACTIVITIES

MEETINGS OF MERIT
June, 1933

Two such excellent meetings were held during the month of June that the Speakers Bureau is forced to award to each the honor of having earned the distinction of "Meeting of Merit—June, 1933."

The members of the Dubuque County Medical Society were hosts to the Druggists Association of their county at a picnic the afternoon of June 20. Each member donated enough money to pay for his own expenses and those of one druggist guest. A "big time" was reported to have been enjoyed by all—a real dinner, games, sports and "what have you." Such congeniality between these two professions whose interests are so closely allied is to be universally sought.

The other meeting was one held by the Mills County Medical Society on June 22. The program for this meeting was presented by the veterinarians of Mills County. The evening was devoted to a discussion of subjects of interest to both the veterinarians and the physicians. A duplication of this type of program in other counties would be well worthwhile.

The activities of two other counties were so interesting that they deserve honorable mention, at least. They were a result of the postgraduate courses held this spring and illustrate the value of these courses in promoting friendship and social relations between members of the medical profession.

The Black Hawk County Medical Society held a picnic at the Wameso Lodge, on June 8 in honor of those who had taken the postgraduate course at Waterloo. The members of the Black Hawk Society were hosts and made the occasion a most enjoyable one for all of their guests.

The postgraduate course which was held at Ames met at the State College Hospital. All of the very ample facilities of the hospital were made available to the lecturers and the doctors. Dr. J. F. Edwards and his staff did everything possible to make the meetings as profitable and comfortable as they could be and served appetizing luncheons at the close of each lecture.

CENTURY OF PROGRESS
In Medicine

The medical exhibits at the World's Fair present very conclusive evidence that the progress of medical science has been as extensive and as spectacular as that in any other field. The improvement in the methods of diagnosis, treatment and the prevention of disease of the present day over those in universal use a century ago is very striking. The Speakers Bureau feels that an outline of the progress made in the various fields of medicine will be both interesting to the public and very appropriate at this time. Therefore during the remainder of the months the Century of Progress Exposition is in force the first radio broadcasting period each month will carry a message of the advancement made in such phases of medicine as surgery, internal medicine, pediatrics, and obstetrics.

Radio Talks

WSUI—Thursdays, 8:00 p. m.; WOI—Fridays, 4:00 p. m.

July 6-7—A Century of Progress in Medicine: Surgery—Joseph Priestley, M.D.

July 13-14—Hot Weather Meals—Miss M. L. Giddings, Ass't Prof. of Home Economics, University of Iowa.

July 20-21—Typhoid Fever—W. H. Longworth, M.D.

July 27-28—The Baby in Summer—W. A. Anneberg, M.D.

Aug. 3-4—A Century of Progresss in Medicine: Internal Medicine—H. W. Rathe, M.D.



WALTER LAWRENCE BIERRING, M.D.,
1868—

Member of the American Medical Association since 1899; Member of the House of Delegates of A.M.A. representing the Iowa State Medical Society in 1904, 1905 and 1906; the Section on Pathology in 1910 and 1911; and the Section on Medicine in 1922, 1923, 1924 and 1925; Secretary of the Section of Physiology and Pathology, A.M.A., 1906; Chairman of the Section of Physiology and Pathology, A.M.A., 1907; Vice-Chairman of the Section on Medicine, A.M.A., 1912; Chairman of the Section on Medicine, A.M.A., 1919; President of the Iowa State Medical Society, 1908; Professor of Pathology and Bacteriology, University of Iowa College of Medicine, 1893 to 1903; Professor of Medicine, University of Iowa College of Medicine, 1903 to 1910; Professor of Medicine, Drake University Medical School, 1910 to 1914; President of Alpha Omega Alpha (honorary medical fraternity) since 1924; Honorary Member of Phi Beta Kappa since 1925; President of the Iowa State Board of Health and Medical Examiners, 1914 to 1921; Member of the National Board of Medical Examiners since its origin (1916) to date; President of the National Board of Medical Examiners, 1927, 1928, 1929, 1930; Honorary Member of the Royal College of Physicians of Edinburgh, 1921, "For distinguished services in connection with reciprocity between Great Britain and America in matters of medical education"; Member of the Commission on Medical Education organized by the Association of American Medical Colleges, 1925 to date; Member of the Commission on Medical Education appointed by the Secretary of War, 1919, to study Medical Education in France and Great Britain; Secretary and Editor of the Federation of State Medical Boards of the United States since its origin, 1915 to date; Member of the Board of Regents of the American College of Physicians, 1929 to 1936.

DR. WALTER L. BIERRING

President Elect of the American Medical Association

The election of Walter Lawrence Bierring to the presidency of the American Medical Association is a source of great pleasure to his many friends in Iowa and throughout the nation. It is a fitting recognition of a devotion of many years to the practice of medicine and to the development of medical education and medical licensure.

Dr. Bierring was born of Danish parentage, in Davenport, Iowa, in 1868. His father was a carpenter, a direct descendant of the Danish explorer, Bering, for whom the Bering Sea is named. He was educated in the public schools of Davenport and in the State University of Iowa where he was graduated in medicine in 1892. After postgraduate work in Heidelberg, Vienna, and in the Pasteur Institute in Paris, he returned to the Medical College of the University of Iowa and started a career that has led through medical education, medical practice and licensure. Although he has not been a faculty member since 1914 he has continued to take an active part in medical education through his connection with the Federation of State Medical Boards, the National Board of Medical Examiners, the Commission on Medical Education of the Association of American Medical Colleges, and the Commission on Medical Education which was appointed by the Secretary of War in 1919 to study medical education in France and Great Britain. It was for distinguished services in connection with reciprocity between Great Britain and America in matters of medical education that he was awarded an honorary membership in the Royal College of Physicians of Edinburgh in 1921. This recognition is the more significant, since an honorary membership had not been previously conferred for 108 years.

In presenting Dr. Bierring to the House of Delegates of the American Medical Association, the Iowa delegation emphasized the fact that he is of the rank and file of medical practitioners; that through his long experience in practice and contact with people, his familiarity with the doctors' problems, and his devotion to organized medicine he is peculiarly fitted to represent the American Medical Association.

The American Medical Association has conferred its highest honor upon Walter Lawrence Bierring. The medical profession of Iowa is confident that he in turn will bring honor and credit to the American Medical Association.

Dr. Bierring has contributed many articles to medical literature, including those listed below:

Lymphosarcoma of the Intestinal Tract, 1894.
The Modern Treatment of Diphtheria with Demonstration of Method of Preparing Antitoxin, 1895. (Republished in 1925.)
Serum Therapy: Its Sphere and Limitations, 1898.
Carcinoma in Early Life, 1900.
Gastro-Intestinal Auto-Intoxication, 1900.
The Practical Results of Etiologic Investigation in Tuberculosis, 1900.
The Colon Bacillus in its Causative Relation to Suppurative Inflammations, 1901.
Tumors of the Intercarotid Gland, 1901.
The Gastro-Intestinal Type of Arteriosclerosis, 1902.
Multiple Periosteal Sarcomata of the Cranium, 1903.
The Contracted Kidney and its Clinical Significance, 1904.
Secondary Manifestations of Hypernephromata, 1904.
Etiology of Cholecystitis and Cholelithiasis, 1904.
The Significance and Treatment of the Gastro-Intestinal Form of Arteriosclerosis, 1904.
A Study of the Blood in Banti's Disease Before and After Splenectomy, 1906.
Etiological Classification of Leukemia, 1907.
The Need of Medical Cooperation in Laboratory Work, Chairman's Address, Section on Pathology, A.M.A. 1907.
The Duties and Responsibilities of a State Society, President's Address, 1908.
Remissions in Pernicious Anemia, 1908.
A Report of Three Cases of Leukemia, 1908.
The Diagnosis and Treatment of Pernicious Anemia, 1909.
The Treatment of Chronic Heart Disease, 1910.
The Role of Pathology and Physiology in Preventive Medicine, 1910.
Acute Poliomyelitis in Iowa, 1912.
Chloroma, 1912.
The Use of the X-ray in the Diagnosis of Heart Disease, 1913.
Status Thymolymphaticus, 1913.
Visceral Syphilis, 1913.
The Relation of Physical Therapy to the Hospital Patient from the Point of View of the Internist, 1914.
Thrombosis and Embolism: A Series of Unusual Circulatory Accidents Occuring in Acute Infections, 1914.
The Problems of Medical Prognosis, 1915.
Pulse Pressure as a Measure of Circulatory Efficiency, 1916.
A Model Practice Act, 1916.
Streptococcus Pneumonia and Empyema, 1918.
Medical Licensure in Great Britain, 1919.
Medical Education and Licensure in France, 1919.
Relation of Internists to Military Medicine, Chairman's Address, Section on Medicine, A.M.A., 1919.
Inter-Allied Medical Relations, 1920.
Chronic Nephritis in the Young, 1920.
Intermittent Hydrarthrosis, 1921.
Medical Education and Licensure in the United States as Viewed by European Visitors, 1921.
The General Medical Council of Great Britain, 1922.
Subacute Bacterial Endocarditis, 1923.
The First Decade of Federation Activities (Report of Secretary), 1923.
Teaching of Pharmacology, 1924.
The Early Regulation of the Practice of Medicine in America, 1924.
Examinations—Written Versus Practical, 1925.
Subacute Bacterial Endocarditis: A Clinical Study of Thirty Cases, 1926.
Liver Therapy in Pernicious Anemia, 1927.
Fairchild Issue of the Iowa State Medical Journal, September, 1928.
Undulant Fever: A Clinical Study of 150 Cases in Iowa, 1929.
The British Method of Licensure and Registration, 1929.
The Relation of Basic Science Examinations to Medical Licensure, 1930.
Tendencies of Medical Education, 1931.
The Coronary Problem in Heart Disease, S. F. Barker Fetschrift International Clinics, 1931.
The Coronary Circulation in Health and Disease, Address, Florida State Medical Society, 1932.
The Hospital as a Community Asset, 1932.
Myocardosis—A Syndrome, A.M.A., 1933.

Minutes of the Iowa State Medical Society Eighty-second Annual Session

May 10, 11, 12, 1933---Des Moines

Wednesday Morning, May 10, 1933

The opening session of the Eighty-second Annual Session of the Iowa State Medical Society, held at the Fort Des Moines Hotel, Des Moines, May 10-12, 1933, convened at eight-thirty o'clock, Dr. Channing G. Smith, Granger, Immediate Past President, presiding.

Immediate Past President Smith presented the gavel to President William W. Bowen.

Greetings were extended on behalf of the City of Des Moines by Honorable Dwight N. Lewis, Mayor of Des Moines, and on behalf of the Polk County Medical Society by Dr. Fred A. Moore.

The response was given by Dr. Clyde A. Boice, Washington.

The scientific session began with a medical clinic by Dr. David P. Barr of St. Louis, Missouri, followed by a surgical clinic by Dr. Harry M. Richter, Chicago, Illinois.

The following papers were presented:

"Agranulocytosis," by Dr. Frederick H. Lamb, Davenport; discussed by Dr. Benjamin F. Wolverton, Cedar Rapids.

"Appendicitis: Its Increasing Mortality," by Dr. George M. Crabb, Mason City; discussed by Dr. Lester Powell, Des Moines.

"How Can the Present Mortality from Appendicitis Be Lowered," by Dr. Clarence L. Heald, Sigourney; discussed by Dr. Carl J. Lohmann, Burlington.

"The Perforated Appendix," by Dr. Frederick W. Mulsow.

The meeting adjourned at twelve o'clock.

Wednesday Afternoon, May 10, 1933

The Wednesday afternoon session convened at one forty-five o'clock, President Bowen presiding.

The following papers were presented:

"The Malarial Therapy of Neurosyphilis," by Dr. William E. Ash, Council Bluffs; discussed by Dr. Leonard P. Ristine, Cherokee.

"Address in Surgery—Radical Gastric Surgery in Peptic Ulcer," by Dr. Harry M. Richter, Chicago, Illinois.

"The Use and Abuse of Cesarean Section," by Dr. Harry W. Vinson, Ottumwa; discussed by Dr. Regnar M. Sorensen, Cumberland, and Dr. Erwin von Graff, Iowa City.

"Leads in Diagnosis," by Dr. Albert A. Schultz, Fort Dodge.

"The Treatment of Functional Menstrual Irregularities in Young Women," by Dr. Della G. Drips, Rochester, Minnesota.

"Laboratory Technic and the Practice of Medicine," by Dr. Allen C. Starry, Sioux City; discussed by Dr. Aldis A. Johnson, Council Bluffs.

"Reporting a Case of Ruptured Renal Aneurysm with Complete Recovery After Operation," by Dr. John E. Brinkman.

The meeting adjourned at five-ten o'clock.

Thursday Morning, May 11, 1933

The Thursday morning session convened at eight thirty-five o'clock, President Bowen presiding.

A surgical clinic was presented by Dr. Harry M. Richter, Chicago, Illinois, followed by a medical clinic by Dr. David P. Barr, St. Louis, Missouri.

The following papers were presented:

"Rupture of Wounds Following Abdominal Operation," by Dr. Guy T. McCauliff, Webster City (read by Miss Dorothy M. Nelson).

"Surgical Aids," by Dr. Royal A. Becker, Atlantic.

The papers by Drs. McCauliff and Becker were discussed by Dr. William Jepson, Sioux City, and Dr. Erwin von Graff, Iowa City, and closed by Dr. Becker.

President Bowen read his address, "The Present Status of the Medical Profession."

Dr. William C. Finnoff, Denver, guest of the Section on Ophthalmology, Otology and Rhinolaryngology, presented a paper on "Tuberculosis in Ocular Disease."

The meeting adjourned at twelve twenty-five o'clock.

Thursday Afternoon, May 11, 1933

The Thursday afternoon session convened at one-thirty o'clock, President Bowen presiding.

The following papers were presented:

"Address in Medicine—The Functions of the Anterior Lobe of the Hypophysis," by Dr. David P. Barr, St. Louis, Missouri.

"Diagnosis of Mild and Atypical Cases of Exophthalmic Goiter," by Dr. William A. Plummer, Rochester, Minnesota.

"Diagnosis and Management of the Toxic Thyroid," by Dr. Thomas F. Thornton, Waterloo.

"Diagnosis of Hypothyroidism," by Dr. Clarence W. Baldridge, Iowa City.

The papers by Drs. Plummer, Thornton and Baldridge were discussed by Dr. Frank J. Rohner, Iowa City.

"Hyperinsulinism: Case Reports and Discussion of Medical and Surgical Treatment," by Dr. James A. Evans, La Crosse, Wisconsin; discussed by Dr. Edwin B. Winnett, Des Moines.

"Labor Complicated by Misplaced Placenta," by Dr. James F. Taylor, Sioux City; discussed by Dr. Fred Sternagel, Williamsburg, and Dr. Emil Junger, Soldier.

A summary of the afternoon program was given by Dr. David P. Barr, St. Louis.

The meeting adjourned at four-forty o'clock.

Friday Morning, May 12, 1933

The Friday morning session convened at eight forty-five o'clock, President-elect Taylor presiding.

The following papers were presented:

"Eczema in Infancy," by Dr. Harry C. Willet, Des Moines.

"Non-diphtheritic Laryngitis," by Dr. Dennis H. Kelly, Des Moines.

"Nephritis in Children," by Dr. Morgan J. Foster, Cedar Rapids.

"Rheumatic Heart Disease," by Dr. Roland W. Stahr, Fort Dodge.

"Tuberculosis in Infancy," by Dr. Arnold M. Smythe, Des Moines.

"Toxoid in Diphtheric Prevention," by Dr. Bennett A. Melgaard, Sioux City.

"Infant Feeding," by Dr. Robert O. Hughes, Ottumwa.

"Bronchoscopy," by Dr. James A. Downing, Des Moines.

"Bronchiectasis," by Dr. Mark L. Floyd, Iowa City.

"Blood Transfusions: Indications for," by Dr. Lee F. Hill, Des Moines.

"Thymic Disturbances in Children," by Dr. Glen E. Harrison, Mason City.

"Treatment of Pneumonia," by Dr. Joseph B. Thornell, Council Bluffs.

President-Elect Harkness was introduced and made a few remarks.

Secretary Parker gave the report of the House of Delegates.

The meeting adjourned at eleven-thirty o'clock.

Section on Ophthalmology, Otology and Rhinolaryngology

Thursday Morning, May 11, 1933

The opening session of the Section on Ophthalmology, Otology and Rhinolaryngology, held in connection with the Eighty-second Annual Session of the Iowa State Medical Society, at the Fort Des Moines Hotel, Des Moines, May 10-12, 1933, convened at nine-fifteen o'clock, Dr. Harold J. McCoy, Des Moines, Chairman, presiding.

The Chairman's address, "The Rational Viewpoint in Our Practice," was presented by Dr. Harold J. McCoy, Des Moines.

The following papers were presented:

"Intra-ocular Foreign Body: An Unusual Case Report," by Dr. John E. Rock, Davenport; discussed by Dr. George A. May, Des Moines; Dr. Gordon F. Harkness, Davenport; Dr. William W. Pearson, Des Moines; Dr. Henry B. Young, Burlington, and Dr. John E. Rock, Davenport.

"Retinoblastoma," by Dr. Frank L. Secoy, Sioux City; discussed by Dr. Leland H. Prewitt, Ottumwa; Dr. J. H. Matheson, Iowa City; Dr. William C. Finnoff, Denver, Colorado; and Dr. Frank L. Secoy, Sioux City.

"The Diagnosis and Treatment of Trigeminal Neuralgia," by Dr. Walter D. Abbott, Des Moines; discussed by Dr. Harry Ivins, Cedar Rapids; Dr. Gordon F. Harkness, Davenport, and Dr. Walter D. Abbott, Des Moines.

The meeting adjourned at eleven-forty o'clock.

Thursday Afternoon, May 11, 1933

The Thursday afternoon session convened at two o'clock, Chairman McCoy presiding.

The following papers were presented:

"Nasal Allergy," by Dr. Henry I. McPherrin, Des Moines; discussed by Dr. Raleigh R. Snyder, Des Moines; Dr. J. A. Downing, Des Moines; Dr. James E. Reeder, Sioux City; Dr. Harold J. McCoy, Des Moines, and Dr. Henry I. McPherrin, Des Moines.

"Infections of Parotid Fossa," by Dr. Jack V. Treynor; discussed by Dr. Gordon F. Harkness, Davenport; Dr. I. N. Crow, Fairfield, and Dr. Jack V. Treynor, Council Bluffs.

"The Runnin' Ear," by Dr. Ben G. Dyer, Ames; discussed by Dr. Ellis G. Linn, Des Moines, and Dr. Ben G. Dyer, Ames.

"Histology of the Inner Ear," by Dr. Dean M. Lierle, Iowa City; discussed by Dr. J. B. Naftzger, Sioux City; Dr. Ellis G. Linn, Des Moines, and Dr. Dean M. Lierle, Iowa City.

The report of the Nominating Committee was presented by Dr. James E. Reeder of Sioux City, and the following were elected for the ensuing year:

Chairman: Dr. Royal F. French, Marshalltown.

Co-chairman: Dr. Elmer P. Weih, Clinton.

Discussion was had concerning the policy of the Section for the next year's program, and various suggestions were made to be transmitted to the Chairman and Co-chairman.

The meeting adjourned at four-twenty o'clock.

Transactions House of Delegates

Iowa State Medical Society, Eighty-second Annual Session May 10, 11, 12, 1933—Des Moines

The House of Delegates of the Iowa State Medical Society met in the Assembly Room of the Hotel Fort Des Moines, in Des Moines, on Wednesday, May 10, 1933, and was called to order by President William W. Bowen at 3:30 p. m.

The Secretary, Dr. Robert L. Parker, *moved* that the official registration constitute the roll call for the day. *Motion seconded and carried.*

Registration showed the presence of 66 delegates, 13 alternates and 15 officers, or a total of 94.

The Secretary *moved* that the minutes of the Friday morning session of 1932, as published in the July issue of the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY, be approved. *Motion seconded and carried.*

Dr. E. B. Bush, of Ames, *moved* that the reports as printed in the handbook be received by the House of Delegates. *Motion seconded and carried.*

Reports of Officers

REPORT OF THE SECRETARY

House of Delegates, Iowa State Medical Society:

The following report for the year 1932 is respectfully submitted:

The past year has found the doctors in more severe financial distress than in 1931. I feel that the payment of county and state society dues has been a hardship on a large number, and an impossibility for some. We have tried to emphasize the fact that the inability to pay dues should not deprive any member of the privileges he has previously enjoyed. We have therefore offered, in cases of emergency, to accept non-interest-bearing notes for the state society dues, such notes to be forwarded by the county society secretary.

In my three years as secretary of the state society, I have seen an increase in the efficiency of the county society secretaries. Their reports have been more complete and have been rendered more promptly, and their correspondence has been more satisfactory. I wish at this time to express my appreciation to the county society secretaries. They have a difficult and oftentimes a thankless job.

During the year the state society officers have attended a number of district and county society meetings—not so many as we would have liked to visit, but we have tried to curtail traveling and all other unnecessary expenses.

Since July 1, 1932, we have carried on the work of the state society without a managing director. We have the same office force as before, and the efficient and hearty cooperation of each one in the office has made our work most pleasant.

Our relations with allied professions—the dentists, pharmacists, veterinarians and nurses—have grown more understanding; they have helped us in our legislative activities and in many other ways. I feel that these inter-professional relations should be encouraged in the county societies, by making the members of these allied professions associate members of the county medical societies, with or without the payment of dues, as the local society desires. The scientific programs of some of our smaller county societies could be helped very materially by such a move.

The paid membership on December 31, 1931, was 2,310, and on December 31, 1932, we had 2,213 paid members. I feel that this small loss was due more to the depression than to the increase in dues.

In order to keep our representation of three delegates in the House of Delegates of the American Medical Association, we must maintain our high membership. This apportionment has been made every three years, beginning in 1925, and the next reapportionment will therefore be in 1934.

For the financial report of the secretary, required by the constitution and by-laws, you are referred to the detailed certified public accountants' report made to the Board of Trustees, and included in the Report of the Treasurer.

In closing, I wish to express my appreciation to the trustees, councilors and all other officers and committees of the Society, for their cooperation and indulgence in my efforts to serve the profession of the state in a task which I have thoroughly enjoyed.

Respectfully submitted,
Robert L. Parker, Secretary.

The Secretary *moved* that the Report of the Secretary, as printed in the handbook, with a supplementary report on membership data, to be published in the JOURNAL, be accepted. *Motion seconded and carried.*

Supplementary Report of the Secretary May 1, 1933

Number of active members in State Society	1,684
Number of members delinquent for 1933	533
Eligible non-members	196
Ineligible non-members	164
Physicians retired or not in practice	92
Percentage of eligible physicians holding membership	75

REPORT OF THE TREASURER

House of Delegates, Iowa State Medical Society:

The report of the auditor for the calendar year 1932 is presented herewith in full and represents a detailed account of the fiscal transactions for the year.

The total income for the year, as shown in Exhibit "B," was $36,735.68, and the total expenditures were $33,988.56, leaving an excess of income over expenditures amounting to $2,747.12, as compared with a loss of $4,154.17 for the year ended December 31, 1931. The income for the year exceeded that for 1931 by $3,366.45; while expenses decreased $3,534.84.

Treasury bonds with a face value of $9,000.00 were purchased for $8,217.00 and the funds for this transaction were drawn out of the savings account. The investment nets a slightly larger income for the Society than the savings account would return. The total bond investment of the Society as of January 1, 1933, had a face value of $34,500.00. Interest on bonds and savings account during the year amounted to $1,038.97. The net worth of the Society as of January 1, 1933, was $34,626.62.

The report of the Board of Trustees will explain the method of budgeting income and expenditures throughout the year.

Respectfully submitted,
E. B. Winnett, Treasurer

AUDITOR'S REPORT

December 31, 1932

January 14, 1933

Dr. Oliver J. Fay, Chairman,
Board of Trustees,
Iowa State Medical Society,
Des Moines, Iowa.

Dear Sir:

In accordance with your instructions we have examined the books of account of the

IOWA STATE MEDICAL SOCIETY
DES MOINES, IOWA

for the year ended December 31, 1932, and submit our report thereon, together with the following statements:

Exhibit "A"—Cash Account for the Year Ended December 31, 1932
Exhibit "B"—Income Account for the Year Ended December 31, 1932
Schedule No. 1—Expenditures for the Year Ended December 31, 1932
Schedule No. 2—Expenditures (Speakers Bureau) for the Year Ended December 31, 1932

The following comments are made on the principal items included in the foregoing Exhibits:

CASH ACCOUNT

A detailed cash account for the year ended December 31, 1932, is given in Exhibit "A", showing the balance on hand at the beginning of the year, receipts and disbursements during the year, and the balance in the respective bank accounts at December 31, 1932. The following is a summary of the aforesaid cash account:

Cash in Banks at December 31, 1931		$ 5,494.97
Receipts		36,735.68
Total		$42,230.65
Expenditures:		
Expenses (Schedule No. 1)	$29,626.13	
Treasury Bonds Purchased (Schedule No. 1)	8,217.00	
Expenses, Speakers Bureau (Schedule No. 2)	4,362.43	
Total Expenditures		42,205.56
Cash in Banks at December 31, 1932		$ 25.09
Bankers Trust Company	$ 1.60	
Iowa-Des Moines National Bank	15.47	
Des Moines Savings Bank	8.02	
		$ 25.09

All receipts as herein shown were traced to the respective depository accounts, and all disbursements therefrom were supported by cancelled checks.

The balances in the respective bank accounts were reconciled with their statements for the month of December, 1932, and the balances shown by the latter were verified by communication with the banks.

Schedules No. 1 and No. 2, respectively, set out in detail the expenditures for the year ended December 31, 1932. All of these disbursements were supported by checks drawn by the Treasurer, Dr. E. B. Winnett, upon vouchers drawn by the Secretary, Dr. R. L. Parker. Attached to and supporting the vouchers were invoices from the various creditors duly approved by the Board of Trustees, of which Dr. Oliver J. Fay is chairman.

INCOME AND EXPENSE ACCOUNT AND INVESTMENT ACCOUNT

A detailed Income and Expense Account and Investment Account for the year ended December 31, 1932, is given in Exhibit "B" which shows an excess of income over expenses of $2,747.12, as compared with a loss of $4,154.17 for the year ended December 31, 1931. The following is a summary of the aforesaid Exhibit "B" showing the comparative amounts for the year 1931.

	1932	1931	Increase or Decrease
INCOME:			
Receipts from Secretary	$32,041.13	$25,989.66	$6,051.47
Speakers Bureau	2,775.58	3,909.34	1,133.76
Annual Sessions	880.00	2,092.00	1,212.00
Refund on Advance to G. Blake	0...	228.56	228.56
Interest on Liberty Bonds	995.62	959.22	36.40
Interest on Savings Accounts	43.35	190.45	147.10
TOTAL INCOME	$36,735.68	$33,369.23	$3,366.45
EXPENSES:			
Schedule No. 1	$29,626.13	$35,052.06	$5,425.93
Schedule No. 2 (Speakers Bureau)	4,362.43	2,471.34	1,891.09
TOTAL EXPENSES	$33,988.56	$37,523.40	$3,534.84
NET INCOME OR LOSS	$ 2,747.12	$ 4,154.17	$6,901.29

It will be observed that the income has increased $3,366.45, while the expenses have decreased $3,534.84, thereby showing an improvement of $6,901.29 as compared with the year 1931.

The speakers bureau account may be summarized as follows:

	1932	1931
Fees	$2,775.58	$3,909.34
Expense	4,362.43	2,471.34
Net Income or Loss	$1,586.85	$1,438.00

INVESTMENT ACCOUNT

The following are the transactions affecting this account during the year ended December 31, 1932:

Net Income for the year 1932		$ 2,747.12
Add:		
Cash in Bank—December 31, 1931		5,494.97
Treasury Bonds on Hand—December 31, 1931		26,384.53
Total Funds at December 31, 1932,		$34,626.62
Represented by:		
Cash in Banks:		
Bankers Trust Company	$ 1.60	
Iowa-Des Moines National Bank	15.47	
Des Moines Savings Bank	8.02	
Total Cash in Banks	$ 25.09	
3⅜% Treasury Bonds "Cost"		
On Hand Dec. 31, 1931 (Face Value $25,500)	26,384.53	
Purchased 1932 (Face Value $9,000)	8,217.00	
Total Funds (As Above)		$34,626.62

The 3⅜% Treasury Bonds of a face value of $34,500.00 were submitted for our inspection.

We desire to record our appreciation of the courtesies extended us during the course of our examination, and we shall be glad to supply any additional information herein.

Yours truly,
W. WIDDUP & COMPANY,
Certified Public Accountants,
Chartered Accountants.

Exhibit "A"

Cash Account
For the Year Ended December 31, 1932

	Total	Secretary's Account Bankers Trust Company	Treasurer's Account Iowa-D.M. National Bank	Treasurer's Account D. M. Savings Bank	Speakers Bureau Secretary's Account	Speakers Bureau Treasurer's Account
CASH IN BANKS December 31, 1931	$ 5,494.97	$ 203.45	$ 361.15	$ 1,434.67	$ 4,030.30	$ 187.70
RECEIPTS:						
Dues	$25,735.80	$25,735.80	$ 0...	$ 0...	$ 0...	$ 0...
Advertising	5,486.16	5,486.16	0...	0...	0...	0...
Reprints	769.83	769.83	0...	0...	0...	0...
Miscellaneous	49.34	49.34	0...	0...	0...	0...
Total	$32,041.13	$32,041.13	$ 0...	$ 0...	$ 0...	$ 0...
Speakers Bureau:						
Fees	2,580.00	2,580.00	0...	0...	0...	0...
Traveling Expenses	195.58	185.08	0...	0...	10.50	0...
Total Speakers Bureau	$ 2,775.58	$ 2,765.08	$ 0...	$ 0...	$ 10.50	$ 0...
Annual Sessions	880.00	880.00	0...	0...	0...	0...
Interest on:						
Treasury Bonds	995.62	0...	995.62	0...	0...	0...
Savings Account	43.35	0...	0...	43.35	0...	0...
TOTAL RECEIPTS	$36,735.68	$35,686.21	$ 995.62	$ 43.35	$ 10.50	$ 0...
TOTAL RECEIPTS, INCLUDING CASH IN BANKS	$42,230.65	$35,889.66	$ 634.47	$ 1,478.02	$ 4,040.80	$ 187.70
FUND TRANSFERS	$ 0...	$ 0...	$ 4,228.50	$ 0...	$ 4,040.80	$ 187.70
FUND TRANSFERS	0...	35,888.06	35,888.06	0...	0...	0...
FUND TRANSFERS	0...	0...	1,470.00	1,470.00	0...	0...
TOTAL FUND TRANSFERS	$ 0...	$35,888.06	$41,586.56	$ 1,470.00	$ 4,040.80	$ 187.70
BALANCE AFTER TRANSFER OF FUNDS	$42,230.65	$ 1.60	$42,221.03	$ 8.02	$ 0...	$ 0...
EXPENDITURES:						
Expenses—Schedule No. 1	$29,626.13	$ 0...	$29,626.13	$ 0...	$ 0...	$ 0...
Treasury Bonds Purchases, Schedule No. 1	8,217.00	0...	8,127.00	0...	0...	0...
Expenses—Schedule No. 2	4,362.43	0...	4,362.43	0...	0...	0...
TOTAL EXPENDITURES	$42,205.56	$ 0...	$42,205.56	$ 0...	$ 0...	$ 0...
CASH IN BANKS AT DECEMBER 31, 1932	$ 25.09	$ 1.60	$ 15.47	$ 8.02	$ 0...	$ 0...

Exhibit "B"

Income and Expense Account Including Investment
For the Year Ended December 31, 1932

INCOME:		
Received from Secretary:		
Dues		$25,735.80
Advertising		5,486.16
Reprints		769.83
Miscellaneous		49.34
Total		$32,041.13
Speakers Bureau:		
Fees	$ 2,580.00	
Travel Expense	195.58	
Total Speakers Bureau		2,775.58
Annual Sessions		880.00
Total Receipts from Secretary		$35,696.71
Interest from Liberty Bonds		995.62
Interest from Savings Account		43.35
TOTAL INCOME		$36,735.68
EXPENDITURES—EXPENSES:		
Expenses, as per Schedule No. 1		$29,626.13
Expenses, as per Schedule No. 2 (Speakers Bureau)		4,362.43
TOTAL EXPENSES		$33,988.56
EXCESS OF INCOME OVER EXPENSES FOR THE YEAR ENDED DECEMBER 31, 1932		$ 2,747.12

INVESTMENT ACCOUNT:		
Add:		
Cash in Banks and Treasury Bonds on Hand at December 31, 1931:		
Cash in Banks	$ 5,494.97	
Treasury Bonds "Cost" (Face Value $25,500.00)	26,384.53	
		$31,879.50
TOTAL CASH IN BANKS AND TREASURY BONDS ON HAND AT DECEMBER 31, 1932		$34,626.62
REPRESENTED BY:		
3⅜% Treasury Bonds (Face Value $34,500.00) —Cost		$34,601.53
Cash in Banks:		
Bankers Trust Company	$ 1.60	
Iowa-Des Moines National Bank and Trust Co.	15.47	
Des Moines Savings Bank and Trust Co.	8.02	
Total Cash in Banks		25.09
TOTAL CASH IN BANKS AND TREASURY BONDS (AS ABOVE)		$34,626.62

Schedule No. 1

EXPENDITURES

For the Year Ended December 31, 1932

Date 1932	Check No.	Order No.	Drawn in Favor of	In Payment of	Distribution	Amount
1-13	1493	3442	F. A. Hennessy	Council Meeting	Council	$ 20.90
1-13	1494	3443	F. P. Winkler	Council Meeting	Council	25.00
1-13	1495	3444	W. L. Hearst	Telephone, Travelling	Council	35.20
1-13	1496	3445	B. L. Eiker	Council Meeting, December 9	Council	7.00
1-13	1497	3446	Wm. Jepson	December 8—Buena Vista Co. Meeting December 9—Council Meeting	Council	29.65
1-13	1498	3447	A. V. Hennessy	Council Meeting at Ottumwa	Council	20.00
1-13	1499	3448	I. N. Crow	December 9—Council Meeting	Nurses Training Com.	11.50
1-13	1500	3449	A. W. Erskine	December 9—Council Meeting	Council	13.04
1-13	1501	3450	A. V. Hennessy	December 9—Council Meeting	Council	14.23
1-13	1502	3451	F. A. Hennessy	December 9—Council Meeting	Council	20.90
1-13	1503	3452	Jas. G. Macrae	December 9—Council Meeting	Council	7.30
1-13	1504	3453	H. A. Spilman	December 9—Council Meeting	Council	10.00
1-13	1505	3454	A. M. A.	File Cases	Rent and Office Supplies	10.00
1-13	1492	3456	Edwin J. Frisk	Five Months Postage on Journal	Journal	100.00
1-13	1506	3455	Bratton and Knouf	Membership Cards and Receipts	Printing and Stationery	17.75
1-26	1508	3458	Iowa-Des Moines National Bank	Safe Keeping Charge 7-1-31, 1-1-32	Administrative	10.20
1-26	1507	3457	Old Dutch Ribbon	One Dozen Typewriter Ribbons	Rent and Office Supplies	9.00
1-26	1509	3459	N. W. Bell Telephone	January Services and December Tolls.	Office Sup., Co. Soc., Sp. B.	17.50
1-26	1510	3460	R. R. Simmons	January Salary	Journal	100.00
1-26	1511	3461	Bankers Trust Company	January Rent	Rent and Office Supplies	107.00
1-26	1512	3462	Dorothy McCarthy	January Salary	General Salaries and Journal	115.00
1-26	1513	3463	Dorothy Nelson	January Salary	Speakers Bureau	115.00
1-26	1514	3464	Virginia Bennett	January Salary	General Salaries and Journal	125.00
1-26	1515	3465	Vernon D. Blank	January Salary	General Salaries	500.00
1-26	1516	3466	Gordon F. Harkness	November 11—Trustee Meeting	Trustees	21.60
1-26	1517	3467	E. M. Myers	November 11—Trustee Meeting	Trustees	4.20
1-26	1518	3468	Gordon F. Harkness	January 22—Trustee Meeting	Trustees	26.20
1-26	1519	3469	E. M. Myers	January 22—Trustee Meeting	Trustees	4.50
1-26	1520	3470	Frank P. Winkler	August 26—Council Meeting	Council	25.10
1-26	1521	3471	T. A. Burcham	County Officers Conference	Co. Soc. Activities	30.65
1-26	1522	3472	Western Union	December Account	Adm. and Journal	1.43
1-26	1523	3473	Iowa Press Clippings	December Clippings	Journal	13.32
1-26	1524	3474	Bratton and Knouf	Printing	Stationery and Printing	13.75
1-26	1525	3475	Zaisers	Office Supplies	Rent and Office Supplies	30.11
1-26	1526	3476	Direct Advertising	N. W. Regional Conf. Letters	Miscellaneous	2.00
1-26	1527	3477	Central Engraving	Halftones for Journal	Journal	99.05
1-26	1528	3478	L. R. Woodward	Council Expense	Council	18.20
1-26	1529	3479	L. R. Woodward	County Officers Conference	Co. Soc. Activities	145.76
1-26	1530	3480	Direct Advertising	Multigrapbing Letters	Stationery and Printing	75.32
1-26	1531	3481	Wallace Homestead	Printing	Journal, Reprints, Stationery	945.22
1-26	1532	3482	W. Widdup and Company	Annual Audit	Administrative	100.00
2-18	1548	3495	Mrs. Wilma Glenn	Extra Clerical Work	General Salaries	69.00
2-27	1549	3496	Iowa Press Clipping	January Account	Journal	11.73
2-27	1550	3497	Old Dutch Rihbon Co.	Six Boxes Carbon Paper	Rent and Office Supplies	15.00
2-27		3498	Cancelled			
2-27	1551	3499	Des Moines Clean Towel Service	January and February Accounts	Rent and Office Supplies	2.50
2-27	1552	3500	Northwestern Bell Telephone Co.	January Tolls and February Service	Rent and Office Sup., Adm., Sp. B.	63.58
2-27	1553	3501	Bankers Building Corp.	February Rent	Rent and Office Supplies	107.00
2-27	1554	3502	R. R. Simmons	February Salary	Journal	100.00
2-27	1555	3503	Dorothy Nelson	February Salary	Speakers Bureau	115.00
2-27	1556	3504	Dorothy McCarthy	February Salary	Gen. Salary and Journal	115.00
2-27	1557	3505	Virginia Bennett	February Salary	Gen. Salary and Journal	125.00
2-27	1558	3506	Vernon D. Blank	February Salary	General Salaries	500.00
2-27	1559	3507	Western Union	January Account	Administrative, Legis.	2.48
2-27	1560	3508	Royal Typewriter Co.	For New Machine	Rent and Office Supplies	55.05
2-27	1561	3509	A. M. A.	Transfer Cards	Rent and Office Supplies	1.00
2-27	1562	3510	Addressograph Co.	Changes in Plates	Rent and Office Supplies	2.38
2-27	1563	3511	Zaisers	Office Supplies	Rent and Office Supplies	18.90
2-27	1564	3512	Central Engraving Co.	Halftones	Journal	25.25
2-27	1565	3513	Direct Advertising	Multigraphing Letters	Stationery and Printing	48.41
2-29	1575	3523	F. A. Gillett	Nurses Training Com. 12-30-30, 2-8-32	Other Committees	14.00
2-29	1576	3524	Ira N. Crow	Nurses Training Com. Mtg. 12-30-30, 2-8-32	Other Committees	17.70
2-29	1577	3525	Robert L. Parker	Co. Soc. Ser., Annual Session	Co. Soc. Service, Annual Session	36.94
2-29	1578	3526	Vernon D. Blank	Petty Cash and Travelling Exp.	Off. Sup., Co. Soc., Med. Econ.	67.65
2-29	1579	3527	Dutcher Walker & Ries	Fourth Quarter Medico Legal	Medico Legal	220.20
2-29	1580	3528	L. R. Woodward	Council Expense	Council	13.00
2-29	1581	3529	Wallace Homestead	Printing	Printing-Journal-Reprints	793 15
3-11	1582	3530	Journal A. M. A.	Years Subs. to Journal and Bull.	Legislative Committee	8.00
3-18	1583	3531	Vernon D. Blank	Nurses Training Com. Postage	Other Committees	14.64
3-18	1584	3532	E. M. Myers	March 2—Trustees Meeting	Trustees	4.20
3-18	1585	3533	G. F. Harkness	March 2—Trustees Meeting	Trustees	16.30
3-18	1586	3534	C. G. Smith	Miscellaneous Expense	Co. Soc. Service, Ann. Session Adm. Legis., Other Com.	48.40
3-26	1587	3435	N. W. Bell Telephone Co.	February Tolls, March Service	Adm., Rent and Office Supplies, Co. Soc. Serv., Council	23.85
3-26	1588	3436	Vernon D. Blank	March Salary	General Salaries	500.00
3-26	1589	3437	Virginia Bennett	March Salary	General Salary and Journal	125.00
3-26	1590	3438	Dorothy C. McCarthy	March Salary	General Salary and Journal	115.00
3-26	1591	3439	Dorothy M. Nelson	March Salary	Speakers Bureau	115.00
3-26	1592	3540	Ralph R. Simmons	March Salary	Journal	100.00
3-26	1593	3541	Bankers Building Corp.	March Rent	Rent and Office Supplies	107.00
3-26	1594	3542	Des Moines Electric Light Co.	February Account	Rent and Office Supplies	.80
3-26	1595	3543	Iowa Press Clipping Bureau	February Clippings	Journal	17.12
3-26	1596	3544	Addressograph Co.	Service on Addressograph	Rent and Office Supplies	2.85
3-26	1597	3545	Western Union	February Account	Journal, Speakers Bureau, Nurses Training Com.	2.46
3-26	1598	3546	Central Engraving Co.	Zinc Etching for Journal	Journal	3.24
3-26	1599	3547	Wallace Homestead	Journal and Reprints	Journal-Reprints, Nurses Training Com.	649 89
3-28	1600	3548	R. L. Parker	Last ¾ of Sec. Salary	General Salaries	225.00
			Amount Forward			$ 7,616.25

Schedule No. 1—Continued

Date 1932	Check No.	Order No.	Drawn in Favor of	In Payment of	Distribution	Amount
				Amount Brought Forward		$ 7,616 25
4-9	1601	3549	Mrs. Wilma Glenn	Nurses Training Com. Extra Help	Other Com. and General Salaries	53.00
4-9	1602	3550	Vernon D. Blank	Petty Cash and Postage	Rent and Office Supplies	10.54
4-9	1603	3551	Vernon D. Blank	Trip to Boone, re Trustee Report	Trustees	4.20
4-9	1604	3552	Vernon D. Blank	6th Dist. Meeting, Marshalltown	Co. Soc. Service	8.00
4-9	1605	3553	Vernon D. Blank	10th Dist. Meeting, Creston	Co. Society Service	11.80
4-9	1606	3554	Vernon D. Blank	Woodbury County Meeting, 3-24	Co. Society Service, Annual Session	22.00
4-9	1607	3555	Robert L. Parker	11th District Meeting	Co. Society Service	8.68
4-9	1608	3556	C. A. Boice	March 9—Council Meeting	Council	11.40
4-9	1609	3557	James G. Macrae	March 9—Council Meeting	Council	7.50
4-9	1610	3558	F. P. Winkler	March 9—Council Meeting	Council	26.00
4-9	1611	3559	L. R. Woodward	March 9—Council Meeting	Council	13.85
4-9	1612	3560	F. A. Hennessy	March 9—Council Meeting	Council	20.90
4-9	1613	3561	H. A. Spilman	March 9—Council Meeting	Council	10.00
4-9	1614	3562	B. L. Eiker	Annual Session and Council	Council, Annual Session	13.60
4-9	1615	3563	Arch F. O'Donoghue	Refund on Reprints	Reprints	2.02
4-9	1616	3564	E. M. Myers	March 3—Trustees Meeting	Trustees	4.20
4-9	1617	3565	J. H. Welch Printing Co.	Nurses Training Questionnaires	Other Committees	39.95
4-9	1618	3566	Zaisers	Office Supplies	Rent and Office Supplies	14.85
4-9	1619	3567	Direct Advertising	Multigraphing Letters	Stationery and Ptg., Co. Soc. Service, Other Committees	32.22
4-14	1624	3572	E. M. Myers	10th District Meeting	County Society Services	5.20
4-14	1625	3573	William Jepson	March 9—Council Meeting	Council	14.62
4-14	1626	3574	Chas. B. Taylor	Const. and By-Laws Com. Mtg. 2-28-32	Other Committees	10.45
4-14	1627	3575	Arthur W. Erskine	Clinton Co. Med. Soc. 3-15-32	Council	4.00
4-14	1628	3576	Vernon D. Blank	5th Dist. Mtg. at Boone, 4-13	County Society Services	4.20
4-14	1629	3577	Vernon D. Blank	Trip to Cedar Rapids and Clinton	⅓ Co. Soc. Ser., ⅔ Legislative	13.40
4-14	1630	3578	E. M. Myers	April 14—Trustee Meeting	County Soc. Service	4.70
4-14	1631	3579	L. R. Woodward	6th Dist. Meeting, Marshalltown	County Soc. Service	10.30
4-14	1632	3580	W. L. Hearst	6th District Meeting	County Soc. Service and Council	38.00
4-25	1633	3581	Western Union	March Account	Annual Session, Sp. Bu., Journal	5.61
4-25	1634	3582	Wallace Homestead	March Account	Journal, Printing, Reprints	765.62
4-25	1635	3583	Iowa Press Clipping	March Account	Journal	16.27
4-25	1636	3584	N. W. Bell Telephone Co.	April Service and March Tolls	Council, Legis., Jour., S. B., Adm., Rent and Off. Supplies, Co. Soc., Trustees	46.20
4-25	1637	3585	Vernon D. Blank	April Salary	General Salaries	500.00
4-25	1638	3586	Virginia Bennett	April Salary	General Salaries and Journal	125.00
4-25	1639	3587	Dorothy C. McCarthy	April Salary	General Salaries and Journal	115.00
4-25	1640	3588	Dorothy Nelson	April Salary	Speakers Bureau	115.00
4-25	1641	3589	R. R. Simmons	April Salary	Journal	100.00
4-25	1642	3590	Edwin B. Winnett	Salary ending April 30, 1932	General Salaries	50.00
4-25	1643	3591	D. M. Clean Towel Service	March and April Accounts	Rent and Office Supplies	2.50
4-25	1644	3592	Bankers Building Corporation	April Rent	Rent and Office Supplies	107.00
4-25	1645	3593	Gaar Brothers Typewriter Co.	March Account	Rent and Office Supplies	3.25
4-25	1646	3594	Central Engraving Co.	Annual Session and Journal	Annual Session, Journal	133.61
4-29	1647	3595	Des Moines Photo Copy	Exhibit Floor Plans	Annual Session	4.80
4-29	1648	3596	Welch Printing Co.	Nurses Questionnaires	Other Committees	32.50
4-29	1649	3597	Vernon D. Blank	First District Meeting	Co. Soc. Service	18.95
4-29	1650	3598	Zaisers	Office Supplies	Rent and Office Supplies	51.35
4-29	1651	3599	Dutcher-Walker and Ries	First Quarter Medico Leg. Def.	Medico Legal	267.67
4-29	1652	3600	Tobin-Tobin-Tobin	Medico Legal Defense	Medico Legal	138.45
4-29	1653	3601	Direct Advertising	Multigraphing Letters	Adm. Misc., Soc. Ser., Council, Stationery and Prtg., Med. Econ.	158.82
4-29	1662	3610	Coats Sign Company	Signs for Annual Meeting	Annual Session	53.95
5-6	1663	3611	Verstegen Printing Company	Banquet Program	Annual Session	9.45
5-6	1664	3612	Ford Lumber Company	Material for Exhibits	Annual Session	2.30
5-6	1665	3613	Berkins Van and Stg. Co.	Tables for Exhibits	Annual Session	4.00
5-6	1666	3614	E. F. Biddle	Projection Work at Annual Mtg.	Annual Session	55.49
5-6	1667	3615	Sioux City Paper Co.	Paper Table Cloths for Exhibits	Annual Session	4.00
5-11	1668	3616	Sioux City Chamber of Commerce	Annual Session	Annual Session	24.20
5-11	1669	3617	S. Joseph and Sons	Engraving and Furnishing Gavel	Annual Session	14.00
5-11	1670	3618	Electric Engineering Co.	Wiring for Technical Exhibit	Annual Session	19.30
5-11	1671	3619	Martin Hotel Co.	Program Com., Dinners, 8-24-32	Annual Session	6.90
5-11	1672	3620	Vernon D. Blank	Trip to Sioux City, May 1	Annual Session	23.90
5-11	1673	3621	Vernon D. Blank	N. W. Med. Soc. at Sheldon, 4-28	Legis. Com., Co. Soc. Service	25.70
5-11	1674	3622	Vernon D. Blank	Prog. Com. Meeting, 4-24	Annual Session	22.55
5-11	1675	3623	Chicago N. W. R. R. Co.	Guest fare to Annual Session	Annual Session	229.50
5-18	1676	3624	Henry L. Ulrich	Railroad Fare	Annual Session	16.92
5-18	1677	3625	F. P. McNamara	Express on Specimens for Exh.	Annual Session	14.82
5-18	1678	3626	Mrs. Wilma Glenn	Extra Work	Annual Session, Journal, other Committees	32.50
5-18	1679	3627	Aaron C. Conaway	Military Affairs Comm.	Other Committees	1.75
5-18	1680	3628	Vernon D. Blank	Expenses to Eiker Funeral	Adm. Misc.	6.90
5-18	1681	3629	Vernon D. Blank	Petty Cash and Postage	Rent and Office Supplies	19.94
5-18	1682	3630	Hotel Warrior	Room and Misl. Exp. at Hotel for Guests	Annual Session	149.83
5-18	1683	3631	Hotel Martin	Comp. Banq. Tickets to Exhibitors	Annual Session	37.00
5-18	1684	3632	Paragon Press	Banquet Tickets and Programs	Annual Session	9.50
5-18	1685	3633	Wm. E. Davis	Rent for Typewriter	Annual Session	1.25
5-18	1686	3634	Robert L. Parker	Trip to New Orleans	Administrative Miscellaneous	178.00
5-21	1687	3635	Wm. V. Mullin	Travelling Expenses to Ann. Sess.	Annual Session	83.20
5-21	1688	3636	A. J. Carlson	Incidental Expense to State Mtg.	Annual Session	5.00
5-21	1689	3637	Warrior Hotel	Eiker Flowers in Sioux City	Administrative Miscellaneous	2.00
5-26	1690	3638	Iowa Press Clipping	April Clippings	Journal	17.00
5-26	1691	3639	N. W. Bell Tel. Co.	May Service and April Tolls	Adm, Rent and Office Supplies. Co. Soc. Service	37.61
5-26	1692	3640	R. R. Simmons	May Salary	Journal	100.00
5-26	1693	3641	Dorothy McCarthy	May Salary	General Salary, Journal	115.00
5-26	1694	3642	Dorothy Nelson	May Salary	Speakers Bureau	115.00
5-26	1695	3643	Virginia Bennett	May Salary	General Salary, Journal	125.00
5-26	1696	3644	Vernon D. Blank	May Salary	General Salaries	500.00
5-26	1697	3645	Addressograph Co.	New Plates and Changes	Rent, Office Supplies	4.15
5-26	1698	3646	Central Engraving Co.	Halftones for Journal	Journal	8.01
5-26	1699	3647	Zaisers	Office Supplies	Rent, Office Supplies	13.90
5-26	1700	3648	Wallace Homestead	Printing	Printing, Annual Session, Journal and Reprints	933.32
5-26	1701	3649	Bankers Bldg. Corp.	May Rent	Rent and Office Supplies	107.00
6-3	1713	3660	A. W. Erskine	Council Exp., Maquoketa and Ret.	County Society Service	6.00
			Amount Forward			$13,929.27

Schedule No. 1—Continued

Date 1932	Check No.	Order No.	Drawn in Favor of	In Payment of	Distribution	Amount
				Amount Brought Forward		$13,929.27
6-3	1714	3661	W. E Sturges	Sec. Treas. Bond Premiums	Adm., Misc.	87.50
6-3	1715	3662	John I. Marker	N. W. Regional Conference	Med. Econ. Com.	31 38
6-3	1716	3663	Royal Typewriter Co.	Coupon Books for Ribbons	Rent and Office Supplies	4 00
6-3	1717	3664	W. L. Hearst	Trip to Williamsburg	Council	9.50
6-3	1718	3665	Welch Printing Co.	Nurses Training Questionnaires	Nurses Training Com.	12.25
6-3	1719	3666	Curtis Envelope Co.	Large Envelopes for Office Use	Stationery and Printing	8.81
6-3	1720	3667	Western Union	April Account	Council, Journal, Co. Soc. Ser.	6.32
6-3	1721	3668	M. Solar	Brief Case Use of State Soc. Officers	Rent and Office Supplies	9.30
6-3	1722	3669	Hal. Spilman	1931-32 Councilor Expense	Council	41.85
6-3	1723	3670	Direct Advertising Co.	Multigraphing Letters	Admin., Stationery and Ptg.	143.41
6-3	1724	3671	W. Widdup & Co.	Extra Copies 1931 Audit	Adm. Miscellaneous	12.50
6-3	1725	3672	F. A. Ely	Medico-Legal Expense	Medico Legal	8 95
6-3	1726	3673	C. A. Boice	1931-32 Council Expense	Council	125.80
6-3	....	3674	Void			
6-3	1804	3675	Prof. L. O. Naef	S. U. I. Expense, Exhibit	Annual Session	50 45
6-3	1805	3676	I. H. Borts	S. U. I. Exhibit	Annual Session	20.05
6-3	1806	3677	G. D. Jenkins	S. U. I. Exhibit	Annual Session	16.65
6-3	1807	3678	E. L. Rypins	S. U. I. Exhibit	Annual Session	42.00
6-3	1808	3679	J. R. Schenken	S. U. I. Exhibit	Annual Session	16.70
6-3	1809	3680	State University of Iowa	Truck to Haul Exhibits to Ann. Meeting	Annual Session	50.72
5-29	1702	3681	Iowa-Des Moines National Bank	United States 3¾% Treasury Bonds		8,217.00
6-10	1727	3682	Vernon D. Blank	Story Co. Meetings 5-19 and 27	Co. Soc. Service	7.95
6-10	1728	3683	Vernon D. Blank	Petty Cash	Rent, Office Supplies	6.07
6-10	1729	3684	L. R. Woodward	Council Expense	Council	46.24
6-10	1734	3689	N. W. Bell Telephone Co.	June Service, May Tolls	Admin., Rent and Office Supplies, Trustees, Legis., S. B.	23.95
6-24	1735	3690	R. R. Simmons	June Salary	Journal	100.00
6-24	1736	3691	Dorothy C. McCarthy	June Salary	General Salary—Journal	115.00
6-24	1737	3692	Dorothy Nelson	June Salary	Speakers Bureau	115.00
6-24	1738	3693	Virginia Bennett	June Salary	General Salary and Journal	125.00
6-24	1739	3694	Vernon D. Blank	June Salary	General Salaries	500.00
6-24	1740	3695	Iowa Press Clipping Bureau	May Clippings	Journal	15.75
6-24	1741	3696	LaVere Braucht	Eiker Flowers	Admin. Miscellaneous	12.00
6-24	1742	3697	Caldbeck Tool and Mfg. Co.	Repairing Addressograph	Rent and Office Supplies	1.50
6-24	1743	3698	Bankers Building Corp.	June Rent	Rent and Office Supplies	107.00
6-24	1744	3699	The French Way	Cleaning Drapes	Rent and Office Supplies	5.70
....	....	3700	Missing			
7-6	1745	3701	E. M. Myers	Trustees Meeting	Trustees	5.25
7-6	1746	3702	Western Union	May Telegrams	Speakers Bur., Adm., Ann. Sess.	4.66
7-6	1747	3703	Zaisers	Office Supplies	Rent and Office Supplies, Council, Ann. Sess.	14 85
7-6	1748	3704	Addressograph	Changes on Plates	Rent and Office Supplies	2.22
7-6	1749	3705	Central Engraving Co.	Halftones	Journal	44.63
7-6	1750	3706	Direct Advertising	Multigraph Letters	Stationery and Printing	38.97
7-6	1751	3707	Wallace Homestead	Printing	Ann. Sess., Journal, Reprints	621.87
7-6	1761	3717	Adair Wagner Printing Co.	Reception Com. Badges	Annual Session	4.50
7-6	1762	3718	Robert L. Parker	June Salary	General Salaries	25.00
7-6	1763	3719	Gordon F. Harkness	Trip from Davenport to W. Union	Co. Soc. Service	17.70
7-6	1764	3720	John I Marker	Meeting June 22	Med. Econ. Com.	21.00
7-6	1765	3721	C. S. Cornell	Meeting June 22	Med. Econ. Com.	5.50
7-6	1766	3722	R. F. Childs	Meeting June 22	Med. Econ. Com.	7.50
7-6	1767	3723	James C. Hill	Meeting June 22	Med. Econ Com.	3 40
7-6	1768	3724	Ira N. Crow	Nurses Training, June Meeting	Other Committees	11.50
7-6	1769	3725	W. L. Hearst	June Meeting, Nurses Training	Other Committees	12.50
7-6	1770	3726	F. A. Gillett	June Meeting, Nurses Training	Other Committees	6.10
7-6	1771	3727	Robert L. Parker	Trip to Ottumwa—Des Moines Valley Meeting	Co. Soc. Service	9 05
7-6	1772	3728	Robert L. Parker	Conference with Dr. Bowen, Ft. Dodge	Admin. Misc.	9.20
7-6	1773	3729	F. P. Winkler	Council Expense, 1931-1932	Council	32 00
7-6	1774	3730	Gordon F. Harkness	6-10 Trustee Meeting	Trustees	23.00
7-6	1775	3731	Gordon F. Harkness	Telegrams and Tolls	Adm. Misc.	3.16
7-6	1776	3732	Master Reporting Co.	Reporting Annual Meeting	Annual Session	277.02
7-6	1777	3733	Dr. Mary Swan	Annual Session Expense	Annual Session	50.00
7-15	1778	3734	Petty Cash	Postage in Office	Rent and Office Supplies	10.00
7-15	1779	3735	Edwin J. Frisk	Journal Postage	Journal	100.00
7-15	1780	3736	Robert L. Parker	Austin Flint, Cedar Valley, 7-12	Co. Soc. Services	12.00
7-19	1781	3737	Vernon D. Blank	Allowance on leaving service	General Salaries	250.00
7-28	1782	3738	Iowa Press Clipping Bureau	June Clippings	Journal	14.42
7-28	1783	3739	A. W. Erskine	Council Expense	Council	11.10
7-28	1784	3740	N. W. Bell Telephone Co.	July Service and June Tolls	Sp. Bu., Council, Trustee, Adm.	24 40
7-28	1785	3741	Iowa-Des Moines National Bank	Safe-keeping, January to July	Administrative Misc.	11.10
7-28	1786	3742	Petty Cash	Petty Office Cash	Rent and Office Supplies	5.00
7-28	1787	3743	Robert L. Parker	July Salaries	General Salaries	50.00
7-28	1788	3744	R. R. Simmons	July Salaries	Journal	100.00
7-28	1789	3745	Bankers Building Corp.	July Rent	Rent and Office Supplies	107.00
7-28	1790	3746	Dorothy Nelson	July Salary	Speakers Bureau	115.00
7-28	1791	3747	Dorothy McCarthy	July Salary	General Salaries—Journal	125.00
7-28	1793	3748	Virginia Stewart	July Salary	General Salaries—Journal	125.00
7-28	1793	3749	F. P. Winkler	6-23 Council Meeting	Council	25.00
7-28	1794	3750	H. A. Spilman	6-23 Council Meeting	Council	10.00
7-28	1795	3751	E. M. Myers	Trustees Incidental Expense	Trustees	7.20
7-28	1796	3752	Des Moines Clean Towel Service	May and June Accounts	Rent and Office Supplies	2.50
7-28	1797	3753	M. B. Galloway	Hamilton Co. Contract	Co. Soc. Services	.75
7-28	1798	3754	Gaar Brothers Typewriter	Stencils	Rent and Office Supplies	3.50
7-28	1799	3755	Hobart Cabinet Co.	Cabinet to Dr. Boice	Council	9.69
7-28	1800	3756	Zaisers	Office Supplies	Rent and Office Supplies	12 55
7-28	1801	3757	Central Engraving	Halftones	Journal	15.07
7-28	1802	3758	Wallace Homestead Co.	Journal Printing	Printing—Speakers Bureau	667.53
7-28	1803	3759	L. R. Woodward	June Council Expense	Council	33.73
8-8	1811	3760	John H. Henkin	Annual Session Expense	Annual Session	37.95
8-8	1812	3761	Western Union	Annual Session Telegrams	Annual Session	5.55
8-8	1813	3762	Hotel Martin	Cafe for Nurses	Annual Session	3.40
8-8	1814	3763	C. P. Phillips, Secretary	Refund of Dr. Ady's Dues	Administrative Miscellaneous	12.00
8-15	1810	3764	Sam Hoyt	To Apply on Adv. Commission	Journal	10.00
8-18	1815	3765	W. B. Miller	Refund on Dues for 1932	Administrative Misc.	12.00
8-18	1816	3766	John I. Marker	Med. Econ. Com. 8-17-32	Med. Econ. Com.	21.00
			Amount Forward			$27,225.59

Schedule No. 1—Continued

Date 1932	Check No.	Order No.	Drawn in Favor of	In Payment of	Distribution	Amount
				Amount Brought Forward		$27,225.59
8-18	1817	3767	James C. Donahue	Med. Econ. Com. 8-17-32	Med. Econ. Com.	9.00
8-18	1818	3678	James C. Hill	Med. Econ. Com. 8-17-32	Med. Econ. Com.	3.30
8-18	1819	3679	C. S. Cornell	Med. Econ. Com. 8-17-32	Med. Econ. Com.	5.50
8-19	1854	3770	W. L. Hearst	Council Expense	Council	7.30
8-19	1855	3771	Wm. Jepson	Council Meeting 6-23	Council	29.38
8-25	1820	3773	Postal Telegrapb Co.	June and July Accounts	Annual Session	1.14
8-25	1821	3774	Iowa Press Clipping	July Clippings	Journal	11.32
8-25	1822	3775	Arthur W. Erskine	Councilor Trips	Co. Society Service	6.30
8-25	1823	3776	Thomas Electric Co.	Repairing Electric Fan	Rent and Office Supplies	1.70
8-26	1824	3777	Hostetler Studio	Glossprint—Dr. Lesan	Journal	1.00
8-26	1825	3778	E. M. Myers	8-25, Trustee Meeting	Trustees	5.80
8-26	1826	3779	Gordon F. Harkness	8-25, Trustee Meeting	Trustees	20.55
8-26	1827	3780	Haas Sign Company	Signs for State Fair Exhibit	Adm. Miscellaneous	9.00
8-26	1828	3781	Bankers Building Corp.	August Rent	Rent and Office Supplies	107.00
8-26	1829	3782	R. R. Simmons	August Salary	Journal	100.00
8-26	1830	3783	Robert L. Parker	August Salary	General Salaries	50 00
8-26	1831	3784	Dorothy Nelson	August Salary	Speakers Bureau	115.00
8-26	1832	3785	Dorothy McCarthy	August Salary	General Salary and Journal	125 00
8-26	1833	3786	Virginia Stewart	August Salary	General Salary and Journal	125.00
8-26	1834	3787	Cash	Office Postage, Etc.	Rent and Office Supplies	10 00
8-26	1835	3788	N. W. Bell Telephone Co.	August Service and July Tolls	Adm., Council, Co. Soc. Ser.	22.55
8-26	1836	3789	Addressograph Co.	New Belt and Mechanic Chg.	Rent and Office Supplies	2.85
8-26	1837	3790	Central Engraving Co.	Halftones for Journal	Journal	3.46
8-26	1838	3791	Davidsons	Reception Room Furniture	Rent and Office Supplies	199.97
8-26	1839	3792	Direct Advertising	Multigraphing	Stationery and Printing	47 95
8-26	1840	3793	Davis Conway Co.	Recopying Audit	Administrative, Miscellaneous	7 50
8-26	1841	3794	Wallace Homestead Co.	Printing	Journal, Reprints, Printing	792.44
9-7	1853	3805	E. F. Biddle	Operating Movie at Fair	Administrative Miscellaneous	13 00
9-19	1856	3806	H. S. Hoyt	15% Comm. on Adv.	Journal	61.10
9-19	1857	3807	E. F. Biddle	Rental of Film for Fair	Administrative Miscellaneous	10.00
9-23	1858	3808	Des Moines Electric Light Co.	Light Bulbs	Rent and Office Supplies	1.80
9-23	1859	3809	Iowa Press Clipping Bureau	August Clippings	Journal	12.10
9-23	1860	3810	Cash	Office Postage	Rent and Office Supplies	10.00
9-23	1861	3811	N. W. Bell Telephone Co.	August Tolls & September Service	Adm., Council, Sp. Bu., B. of T.	24.10
9-23	1862	3812	Des Moines Clean Towel Service	July and August	Rent and Office Supplies	2.50
9-23	1863	3813	Bankers Building Corp.	September Rent	Rent and Office Supplies	107.00
9-23	1864	3814	Robert L. Parker	September Salary	General Salaries	50.00
9-23	1865	3815	R. R. Simmons	September Salary	Journal	100.00
9-23	1866	3816	Dorothy McCarthy	September Salary	General Salary and Journal	125 00
9-23	1867	3817	Virginia Stewart	September Salary	General Salary and Journal	125.00
9-23	1868	3818	Western Union	August Account	Journal	4.66
9-23	1869	3819	Addressograph	New Plate, Cover and Service	Rent and Office Supplies	6.85
9-23	1870	3820	Zaisers	July and August Account	Rent and Office Supplies	61.00
9-23	1871	3821	Central Engraving Co.	Halftones	Journal	50.96
9-23	1872	3822	Lessing Advertising Co.	Com. on Black Hawk Hotel Adv.	Journal	12.60
9-23	1873	3823	Direct Advertising Co.	Multigraphing	Council, Speakers Bureau	7.68
9-23	1874	3824	Wallace Homestead	Printing	Journal and Reprints	454.07
9-23	1876	3826	Dorothy Nelson	September Salary	Speakers Bureau	115.00
9-23	1877	3827	Direct Advertising	Multigraphing Work	Speakers Bureau	7.50
10-8	1880	3830	LaVere Braucht	Kenefick Flowers	Administrative Miscellaneous	10.00
10-8	1881	3831	Wm. Jepson	September 4, Council Meeting	Council	18.30
10-8	1882	3832	Dorothy McCarthy	September 4, Council Meeting	Council	2.00
10-8	1883	3833	Robert L. Parker	September 4, Council Meeting	Council	25.00
10-8	1884	3834	Chas. B. Taylor	September 4, Council Meeting	Council	22.00
10-8	1886	3836	E. P. Tinkham	Crumpton Expense	Medico Legal	112.00
10-8	1887	3837	Dutcher, Walker & Ries	Medico-Legal, 2nd Quarter	Medico Legal	675.59
10-8	1888	3838	Society of Visual Education	Rental Movie Film	Administrative Miscellaneous	8.37
10-8	1889	3839	L. R. Woodward	Council Expense	Council	20.68
10-26	1892	3842	Iowa Press Clipping	September Clippings	Journal	11.40
10-26	1893	3843	A. W. Erskine	9-4 Council Meeting	Council	17.50
10-26	1894	3844	Old Dutch Ribbon Co.	Addressograph Coupon Book	Rent and Office Supplies	12.00
10-26	1895	3845	F. P. Winkler	District Meeting, 10-11-32	Co. Soc. Service	25.00
10-26	1896	3846	Bankers Building Corp.	October Rent	Rent and Office Supplies	107 00
10-26	1897	3847	Robert L. Parker	October Salary	General Salaries	50.00
10-26	1898	3848	R. R. Simmons	October Salary	Journal	100 00
10-26	1899	3849	Dorothy Nelson	October Salary	Speakers Bureau	115 00
10-26	1900	3850	Dorothy McCarthy	October Salary	General Salary and Journal	125.00
10-26	1901	3851	Virginia Stewart	October Salary	General Salary and Journal	125.00
10-26	1902	3852	N. W. Bell Telephone Co.	October Service and September Tolls	Adm., Sp. Bu., Council, County Soc. Ser.	25.05
10-26	1903	3853	Western Union	September Account	Adm. Miscellaneous	1.51
10-26	1904	3854	A. M. A.	Membership Applications	Adm. Miscellaneous	1.00
10-26	1905	3855	C. A. Boice	Trip to Spencer	Co. Soc. Service	34 60
10-26	1906	3856	L. R. Woodward	Leg. Com. Mtg., 10-14	Legislative Committee	13 95
10-26	1907	3857	Gaar Brothers	Stencils	Rent and Office Supplies	3.50
10-26	1908	3858	Zaisers	Office Supplies	Rent and Office Supplies	29 20
10-26	1909	3858	Central Engraving Co.	Halftones	Journal	74 79
10-26	1910	3860	Wallace Homestead	Printing	Journal, Reprints, Printing	605.70
10-26	1911	3861	C. A. Boice	Council Expense, May-October	Council	86.28
10-26	1912	3862	Petty Cash	Office Postage	Rent and Office Supplies	10.00
11-1	1922	3872	Gordon F. Harkness	10-27 Trustee Meeting	Trustees	18 65
11-1	1923	3873	E. M. Myers	10-27 Trustee Meeting	Trustees	4 75
11-1	1924	3874	C. B. Taylor	10-27 Trustee Meeting	Trustees	9.00
11-1	1925	3875	John H. Henkin	Annual Session Tele: Calls	Annual Session	10.50
11-1	1926	3876	Dutcher, Walker & Ries	Third Quarter	Medico Legal Defense	272.80
11-4	1927	3877	Postmaster, Des Moines	Postage	Adm. Expense	8.00
11-26	1929	3879	LaVere Braucht	Hearst Flowers	Adm. Miscellaneous	10 60
11-26	1930	3880	A. M. A.	Directory Supplement	Rent and Office Supplies	5.00
11-26	1931	3881	Des Moin s Clean Towel Service	September, October Accounts	Rent and Office Supplies	2.50
11-26	1932	3882	Petty Cash	Postage in Office	Rent and Office Supplies	10.00
11-26	1933	3883	Dorothy Nelson	November Salary	Speakers Bureau	115.00
11-26	1934	3884	Dorothy McCarthy	November Salary	Office Salaries and Journal	125.00
11-26	1935	3885	Virginia Stewart	November Salary	Journal and Office Salaries	125.00
11-26	1936	3886	Robert L. Parker	November Salary	Office Salaries	50.00
11-26	1937	3887	R. R. Simmons	November Salary	Journal	100.00
11-26	1938	3888	N. W. Bell Telephone Co.	November Service and October Tolls	Sp. Bureau, Adm., Trustees, Council	20.37
			Amount Forward			$33,762.11

Schedule No. 1—Continued

Date 1932	Check No.	Order No.	Drawn in Favor of	In Payment of	Distribution	Amount
				Amount Brought Forward		$33,762.11
11–26	1939	3889	Bankers Building Corp.	November Rent	Rent and Office Supplies	107.00
11–26	1940	3890	Lloyds Film Storage	Express on Film for State Fair	Administrative Miscellaneous	1.40
11–26	1941	3891	Iowa Press Clipping Bureau	October Clippings	Journal	11.90
11–26	1942	3892	Western Union	October Account	Speakers Bureau and Adm.	2.90
11–26	1943	3893	Postal Telegraph Co.	October Account	Administrative Miscellaneous	4.44
11–26	1944	3894	Multigraph Co.	Ribbon Coupon Book	Rent and Office Supplies	11.10
11–26	1945	3895	Zaisers	Office Supplies	Rent and Office Supplies	1.60
11–26	1946	3896	Berkowitz Envelope Co.	Envelopes	Stationery and Printing	1.20
11–26	1947	3897	Central Engraving Co.	Halftones for Journal	Journal	125.80
11–26	1948	3898	Direct Advertising Co.	Multigraphing Letters	Stationery and Printing	9.35
11–26	1949	3899	Wallace Homestead	Printing	Journal, Prtg., Reprints	739.71
12–15	1952	3902	LaVere Braucht	Parker Flowers	Administrative Miscellaneous	10.59
12–15	1953	3903	Iowa Press Clipping Bureau	November Clippings	Journal	13.50
12–15	1954	3904	Des Moines Clean Towel Service	November and December Account	Rent and Office Supplies	2.50
12–15	1955	3905	Petty Cash	Office Postage	Rent and Office Supplies	10.00
12–15	1956	3906	N. W. Bell Telephone Co.	December Service and November Tolls	Speakers Bur., Adm., Med. Ec.	21.47
12–15	1957	3907	Robert L. Parker	December Salary	General Salaries	50.00
12–15	1958	3908	R. R. Simmons	December Salary	Journal	100.00
12–15	1959	3909	Bankers Building Corp.	December Rent	Rent and Office Supplies	107.00
12–15	1960	3910	Dorothy Nelson	December Salary	Speakers Bureau	115.00
12–15	1961	3911	Virginia Stewart	December Salary	General Salaries and Journal	125.00
12–15	1962	3912	Dorothy McCarthy	December Salary	General Salaries and Journal	125.00
12–15	1963	3913	E. M. Myers	12-15 Trustee Meeting	Trustees	4.50
12–15	1964	3914	James G. Macrae	6-23 Council Meeting	Council	7.50
12–15	1965	3915	Frank P. Winkler	Council Expense	Council	19.75
12–15	1966	3916	C. A. Boice	Mileage to Davenport, Oakville and Morning Sun	Co. Soc. Services	15.86
12–15	1967	3917	James E. Reeder	Council Meetings	Council	7.30
12–15	1968	3918	H. A. Spilman	Trip to Marion County	Council	5.30
12–15	1969	3919	Gordon F. Harkness	12-15, Trustee Meeting	Trustees	19.25
12–15	1970	3920	Western Union	November Account	Med. Econ., Journal, Speakers Bureau	2.32
12–15	1971	3921	Zaisers	Office Supplies	Rent and Office Supplies	7.70
12–15	1972	3922	F. A. Hennessy	Council Expense	Council	1.40
12–15	1973	3923	Central Engraving	Halftones for Journal	Journal	42.30
12–15	1974	3924	L. R. Woodward	Council Expense	Council	31.45
12–15	1975	3925	W. W. Bowen	Traveling Expense	Adm., Co. Soc., Trustee	130.86
12–15	1976	3926	Wallace Homestead	Printing	Journal, Prtg. and Reprints	498.31
12–21	1998	3946	Chas. B. Taylor	Co. Society Services	County Soc. Services	8.60
12–30	1999	3949	W. W. Bowen	12-15, Trustee Meeting	Trustees	10.00
12–30	2000	3950	W. W. Bowen	Minnesota Conf., 12-18	Administrative Miscellaneous	16.30
12–30	2001	3951	H. A. Spilman	Councilor Trip to Chariton	Council	8.50
12–30	2002	3952	R. F. Childs	Med. Econ. Com., 12-23	Med Econ. Com.	9.50
12–30	2003	3953	Corwin S. Cornell	Med. Econ. Com., 12-23	Med. Econ. Com.	5.50
12–30	2004	3954	James C. Donahue	Med. Econ. Com., 12-23	Med. Econ. Com.	9.00
12–30	2005	3955	James C. Hill	Med. Econ. Com., 12-23	Med. Econ. Com.	3.30
12–30	2006	3956	John I. Marker	Med. Econ. Com., 12-23	Med. Econ. Com.	18.00
12–30	2007	3957	C. A. Boice	Trip to Sigourney and Mt. Pleasant	Council	7.85
12–30	2008	3958	Vander Ploeg-Heer	Legal Opinion of N. Y. Plan	Med. Econ. Com.	17.50
12–30	2009	3959	Thomas A. Burcham	Legis. Com. Expenses	Legis. Committee	1,445.72
12–30	2010	3960	M. C. Hennessy	6-23, Council Meeting	Council	26.85
12–31	....	....	Bank Charges	Check Tax		4.14
			TOTAL			$37,843.13

Summary

Expenses	$29,626.13
United States 3⅜% Treasury Bonds	8,217.00
TOTAL	$37,843.13

Schedule No. 2
Expenditures—Speakers Bureau
For the Year Ended December 31, 1932

Date 1932	Check No.	Order No.	Drawn in Favor of	In Payment of	Distribution	Amount
2–5	1533	3483	Direct Advertising, Inc.		Printing	$ 5.06
2–5	1537	3484	B. L. Eiker		Traveling Expense	20.70
2–5	1538	3485	E. L. Wurtzer		Traveling Expense	4.10
2–5	1539	3486	A. A. Johnson		Traveling Expense	8.18
2–5	1540	3487	D. J Glomset		Traveling Expense	28.00
2–5	1541	3488	J. E. Dyson		Traveling Expense	2.50
2–5	1542	3489	W. W Bowen		Traveling Expense	12.00
2–5	1543	3490	College of Medicine, Iowa City		Post Graduate Course	1,799.07
2–5	1544	3491	D. M. Nelson		Post Graduate Course	6.00
2–5	1545	3492	Wallace Homestead		Printing	12.45
2–5	1546	3493	Carpenter Skilling Printing Co.		Post Graduate Course	113.00
2–5	1547	3494	John C. Parsons		Traveling Expense	18.10
2–9	....	3283	E. B. Winnett		Speakers Bureau Account, Transferred to General Account	4,228.50
			Amount Forward			$ 6,257.66

Schedule No. 2—Continued

Date 1932	Check No.	Order No.	Drawn in Favor of	In Payment of	Distribution	Amount
				Amount Brought Forward		$ 6,257.66
2-29	1566	3514	Vernon D. Blank		Traveling Expense	10.00
2-29	1567	3515	Direct Advertising		Printing	63 80
2-29	1568	3516	W. W. Bowen		Traveling Expense	2.00
2-29	1569	3517	L. R. Woodward		Traveling Expense	2.20
2-29	1570	3518	Des Moines Slide Co		Miscellaneous	3.50
2-29	1571	3519	B. F. Wolverton		Traveling Expense	15.00
2-29	1572	3520	Zaisers		Office Supplies	3.25
2-29	1573	3521	Lee Edward Travis		Traveling Expense	5.00
2-29	1574	3522	Fred Moore		Traveling Expense	10.00
4-9	1620	3568	D. J. Glomset		Traveling Expense	41.50
4-9	1621	3569	A. D. Woods		Traveling Expense	10.00
4-9	1622	3570	B. L. Eiker		Traveling Expense	14.50
4-9	1623	3571	Direct Advertising		Printing	12.51
4-29	1654	3602	T. S. Hill		Traveling Expense	17.40
4-29	1655	3603	O. M. Cope		Post Graduate Course	25.00
4-29	1656	3604	B. L. Knight		Traveling Expense	3.00
4-29	1657	3605	James E. Dyson		Traveling Expense	10.00
4-29	1658	3606	Wallace Homestead		Printing	23.00
4-29	1659	3607	Arthur Abt		Traveling Expense	24.47
4-29	1660	3608	E. D. Plass		Traveling Expense	2.25
4-29	1661	3609	Direct Advertising		Printing	33 10
6-3	1703	3650	D. J. Glomset		Traveling Expense	10.00
6-3	1704	3651	Joseph Brown		Post Graduate Course	27.50
6-3	1705	3652	J. D. Boyd		Post Graduate Course	3.50
6-3	1706	3653	F. R. Peterson		Post Graduate Course & Traveling	50.80
6-3	1707	3654	J. J. Foley		Traveling Expense	6.80
6-3	1708	3655	D. M. Nelson		Traveling Expense	5.00
6-3	1709	3656	Wm. F. Mengert		Traveling Expense	11.20
6-3	1710	3657	Gaar Brothers Typewriter Co.		Office Supplies	3.25
6-3	1711	3658	R. N. Lorimer		Traveling Expense	16.50
6-3	1712	3659	Direct Advertising, Inc.		Printing	2.96
6-10	1730	3685	Vernon D. Blank		Traveling Expense	3.20
6-10	1731	3686	D. J. Glomset		Post Graduate Course	23.75
6-10	1732	3687	E. B. Winnett	Speakers Bureau	Post Graduate Course	20.45
6-10	1733	3688	C. W. Baldridge	Speakers Bureau	Post Graduate Course	49.44
7-6	1752	3708	W. W. Bowen	Speakers Bureau	Traveling Expense	8.00
7-6	1753	3709	H. W. Rathe	Speakers Bureau	Traveling Expense	37.30
7-6	1754	3710	James C. Hill	Speakers Bureau	Traveling Expense	21.20
7-6	1755	3711	W. P. Larson	Speakers Bureau	Traveling Expense	17.86
7-6	1756	3712	W. Ray Shannon	Speakers Bureau	Traveling Expense	17.86
7-6	1757	3713	D. J. Glomset	Speakers Bureau	Traveling Expense	23.65
7-6	1758	3714	Multigraph Dept. S. U. I.	Printing Post Grad. Lecture Outline	Post Graduate Course	16.20
7-6	1759	3715	Direct Advertising, Inc.	Speakers Bureau	Printing and Mimeograph	48.93
7-6	1760	3716	A. A. Schultz	Speakers Bureau	Traveling Expense	8.00
8-22	1842	3772	Dennis H. Kelly	Speakers Bureau	Traveling Expense, P. G. Course	19.30
8-30	1843	3795	A. W. Erskine	Speakers Bureau	Traveling Expense	8.00
8-30	1844	3796	B. F. Wolverton	Speakers Bureau	Traveling Expense	26.00
8-30	1845	3797	J. T. Strawn	Speakers Bureau	Traveling Expense	9.10
8-30	1846	3798	J. C. Parsons	Speakers Bureau	Traveling Expense	7 20
8-30	1847	3799	L. C. Kern	Speakers Bureau	Traveling Expense	22 00
8-30	1848	3800	H. A. Spilman	Speakers Bureau	Traveling Expense	10.00
8-30	1849	3801	F. A. Hennessy	Speakers Bureau	Traveling Expense	12.50
8-30	1850	3802	D. J. Glomset	Speakers Bureau	Traveling Expense	116.50
8-30	1851	3803	A. C. Starry	Speakers Bureau	Traveling Exp. and P. G. Course	10 00
8-30	1852	3804	Direct Advertising Co.	Speakers Bureau	Printing	13 84
9-23	1875	3825	D. J. Glomset	Speakers Bureau	Traveling Expense	23 40
10-5	1879	3828	L. A. Hektoen	Speakers Bureau	Post Graduate Course	15.00
10-5	1878	3829	Rock Island R. R.	Speakers Bureau	Post Graduate Course	33.28
10-8	1885	3835	Robert L. Parker	Trip to Clarion	Traveling Expense	8 80
10-12	1890	3840	Paul Cannon	Speakers Bureau	Traveling Exp. and P. G. Course	6.50
10-12	1891	3841	Rock Island R. R.	Speakers Bureau	Traveling Exp. and P. G. Course	53.66
10-28	1913	3863	M. B. Galloway	Speakers Bureau	Traveling Expense	3.05
10-28	1914	3864	Harold E. Robertson	Speakers Bureau	Post Graduate Course	20.00
10-28	1915	3865	Des Moines Slide Co	Speakers Bureau	Traveling Exp. and P. G. Course	9.40
10-28	1916	3866	Wallace Homestead	Speakers Bureau	Printing	28.55
10-28	1917	3867	E. E. Shaw	Speakers Bureau	Traveling Expense	2.95
10-28	1918	3868	Jacob Kulowski	Speakers Bureau	Traveling Expense	10 00
10-28	1919	3868	C. F. Jordan	Traveling Expense	Traveling Expense	9.00
10-28	1920	3870	T. U. McManus	Traveling Expense	Traveling Expense	13 00
10-28	1921	3871	Direct Advertising	Printing	Printing	29 13
11-18	1928	3878	C. F. McClintic	Speakers Bureau	Post Graduate Course	115.00
12-7	1950	3900	Hugh A. McGuigan	Speakers Bureau	Post Graduate Course	15.00
12-7	1951	3901	Rock Island R. R.		Post Graduate Course	33.28
12-15	1977	3927	Ramson Bernard		Traveling Expense	3 50
12-15	1978	3928	Felix A. Hennessy		Traveling Exp. and P. G. Course	7.15
12-15	1979	3929	Henry L. Ulrich		Post Graduate Course	27.70
12-15	1980	3930	Zaisers		Office Supplies	3 25
12-15	1981	3931	B. G. Broghammer		Traveling Expense	2.00
12-15	1982	3932	J. E. Dyson		Traveling Expense	8 40
12-15	1983	3933	R. W. Stahr		Traveling Expense	9 00
12-15	1984	3934	D. J. Glomset		Traveling Expense	12 00
12-15	1985	3935	C. W. Baldridge		Traveling Exp. and P. G. Course	12.00
12-15	1986	3936	F. W. Mulsow		Traveling Expense	2.16
12-15	1987	3937	Frank J. Rohner		Traveling Expense	10.00
12-15	1988	3938	Gordon New		Post Graduate Course	30.00
12-15	1989	3939	H. P. Wagener		Post Graduate Course	25.14
12-15	1990	3940	Scott Co. Med. Society		Miscellaneous	3.25
12-15	1991	3941	E. T. Bell		Post Graduate Course	27 60
12-15	1992	3942	Hotel Fort Des Moines		Post Graduate Course	8.30
12-15	1993	3943	Ralph Pemberton		Post Graduate Course	125.00
12-15	1994	3944	College of Medicine, Iowa City		Post Graduate Course	533.31
12-15	1995	3945	Direct Advertising		Printing	17.24
12-28	1996	3947	C. W. Baldridge		Post Graduate Course	13.00
12-30	1997	3948	Dorothy M. Nelson	To Dr. Barnes for Reading Radio Talks	Miscellaneous	5.00
			TOTAL			$ 8,590 93

The Treasurer, Dr. E. B. Winnett, submitted the following supplementary report, up to May 1, 1933:

Supplementary Report of the Treasurer

The total income for 1933 up to May 1, was $20,267.22, as compared with the income as of May 1, 1932, of $27,557.00. Of this deficit, or loss of income, $6,000 is due to fewer members and lowering of the dues for this year. The expenditures of the first four months of 1933 have been $9,049.69, while the expenditures of the first four months of 1932 were $13,154.07. The net worth of the Iowa State Medical Society as of May 1, 1933, was $45,599.54, while the net worth as of May 1, 1932, was $46,633.23. Thus the net worth of the Society is $1,000 less than a year ago. This difference of expenditures, that is, $9,049.69 for the past year, as opposed to $13,154.07 for the preceding year, can be attributed mostly to the Board of Trustees and its method of budgeting expenditures. I want to commend the Board for the new method of budgeting. I *move* that the Report of the Treasurer, as printed in the handbook, be accepted. *Motion seconded and carried.*

REPORT OF THE CHAIRMAN OF THE COUNCIL

House of Delegates, Iowa State Medical Society:

The Council has had four meetings during the year. One meeting was a two-day meeting at Clear Lake in September which was held for the purpose of a long discussion of matters of importance to the State Society. We feel it was very beneficial.

Another meeting which was an innovation was a combined meeting of the Council with the Board of Trustees for the consideration of all subjects in which they were jointly interested. This meeting also proved of great value.

The Council has felt that its chief concern was the stimulation of scientific interest of the doctors of Iowa and most especially the younger men. A very definite program for getting the younger men on the programs of the county societies and the district meetings was initiated.

The controversy in Monroe County came to the attention of Dr. H. A. Spilman, Councilor of the Ninth District, on April 26, 1932. On May 4, 1932, it was presented to the Council as a whole by the Councilor of the Ninth District and it was immediately referred to a special committee of the Council for a study of the documentary evidence in connection with it. The committee brought in the report to a meeting of the Council on June 23, at which time the Council voted to direct the Monroe County Society to accept the dues of the three men whose dues had been refused, stating that if the dues were not accepted, the Council would be forced to recommend to the House of Delegates that the charter of the Monroe County Medical Society be revoked.

At a Council meeting on February 16, 1933, the following resolution was presented and passed by the Council:

Resolution to be presented to the House of Delegates in the matter of the Monroe County Medical Society.

For persistent violation of Section 5 of Chapter XII of the By-laws by the Monroe County Medical Society; an appeal having been taken to the Council by certain physicians of that county—aggrieved at the refusal of membership—under Sec. 6 of Chapter XII of the By-laws: the Council, after full and complete study of all the data on file (Sec. 7, Chapter XII) has directed the said society to accept the dues (under Sec. 7 of Chapter XII) of said physicians not later than September 1, 1932.

The foregoing order not having been complied with; the Council—under Section 7 of Chapter XII of the By-laws—("If all efforts at conciliation and compromise fail, the Council shall decide what action shall be taken, and its action shall be final")—hereby directs that the House of Delegates—Section 3 of Chapter XII of the By-laws—at once revoke the charter of the Monroe County Medical Society.

Approved by the Council
L. R. Woodward, Chairman.
C. A. Boice, Secretary.

The Council feels, after reviewing all the documentary evidence, that this drastic action is the only course of action left to it.

After thoroughly discussing the situation at a meeting on February 16, the Council voted not in favor of the proposed change in the Constitution.

Dr. A. W. Erskine made a very detailed study of the conditions of maternal and child hygiene in the state and reported to the Council at a meeting on January 11, at which time the Council passed the following resolution:

On motion, regularly made and seconded, it was ordered that while the Council entirely approves the *purposes* of the Division of Maternity and Child Hygiene, it finds so many defects in the present plan of its operation, so much opposition from various quarters to the method of its administration, and so much uneconomical expenditure of public funds, that, especially in these times when retrenchment is necessary in every field of governmental activity, it recommends that the appropriation for the division be temporarily discontinued.

The Nurses Training Committee presented their report and it was accepted. This report is to be the subject of some further consideration.

The Committee on Medical Education and Hospitals presented a supplementary report. The Council voted in favor of having this report published.

The Survey of Iowa by the American Society for the Control of Cancer was referred to the Cancer Committee, which has studied it and made their recommendations.

The Public Relations Committee, which was a new committee last year, has been continued this year, and they have made their separate report.

The Committee on Newspaper Publicity has also been continued.

There is a new Committee on Professional Relations which is the outgrowth of the pharmaceutical

joint committee of last year and the Woodbury County Health Association. This is an effort to bring about more friendly relations between the physicians, veterinarians, pharmacists and nurses.

L. R. Woodward, Chairman.

Dr. Woodward made the following supplementary report:

Because of the large amount of business to come before the House this afternoon, I shall not make a detailed supplementary report. However, I wish to amplify one paragraph of my report. The Council held a meeting at Spirit Lake in September, at which we tried to outline a definite program to be accomplished in the Council this year. I was mindful of what Dr. Smith had told us; that his idea of our State Society was to raise the general level of the practice of medicine in Iowa. Dr. Glomset has been striving to make the doctors of Iowa the most scientific in the country. Dr. Taylor has made a definite effort to locate young men in the state and have them present papers at district or county society meetings. That is the most constructive work of the Council during the past year.

Dr. Woodward *moved* that the report of the Chairman of the Council be accepted. *Motion seconded.*

Dr. S. T. Gray, of Albia, *moved* an amendment to the effect that the report of the Chairman of the Council as printed in the handbook be accepted and placed on file with the exception of that part which dealt with the direction of the Council that the charter of the Monroe County Medical Society be at once revoked. *Motion seconded.*

President Bowen ruled the motion out of order and stated that discussion of the recommendation in regard to Monroe County would come under New Business; that the report of the Chairman of the Council could be accepted without involving a vote on the recommendation.

Dr. Gray appealed to the House on the point of order.

Dr. C. S. Kennedy, of Logan, rose to a point of order and asked that the House refrain from entering into a quibbling controversy during the regular order of business.

President Bowen called for a vote on the original motion, which *carried.*

REPORTS OF COUNCIL COMMITTEES

Report of the Speakers Bureau Committee

Council, Iowa State Medical Society:

The Speakers Bureau is pleased to report the following achievements and activities during the year 1932:

The extension postgraduate courses which have been given by members of the faculty of the College of Medicine of the State University of Iowa and sponsored by the Speakers Bureau since its inauguration were continued, although on a somewhat smaller scale. In the two preceding years circuits of five centers a week, for the ten-weeks period, had been organized for these courses. This schedule was proving rather severe for the lecturers, so this year the circuit was limited to three centers: Washington, Monticello, and West Union. This eastern section of the state was the only one in which the Bureau had not previously offered extension courses. There was an enrollment of 18 members at Washington, 47 at Monticello and 35 at West Union. The fees, which have been twenty dollars the past two years, were reduced to fifteen dollars for the two courses in view of the financial situation.

This one circuit of extension courses given each fall by the College of Medicine, can naturally serve only a limited section of the state. This type of postgraduate work has come into great demand and many requests are made by groups far removed from the circuit which has been planned. The Bureau did not feel justified in asking the College of Medicine to plan another circuit of courses, since the teaching load of each member of the faculty has been increasingly heavy during the past few years. In order to meet some of the demands for postgraduate work, the Bureau organized two independent courses—one in the spring and one in the late fall. The spring course was given to 44 members of the Upper Des Moines Medical Society. The fee of the course was ten dollars. The fall course was given in Des Moines; the fees were twenty dollars and the enrollment about fifty. The lecturers for these courses were men from our own College of Medicine, prominent men throughout the state, and outstanding men from medical schools outside the state.

It is the opinion of individual practitioners and medical schools that these extension courses will constitute a large percentage of the future medical postgraduate work. Iowa is undoubtedly doing as much as or more of this work than any other state. This is a tribute to the interest of the profession in Iowa in scientific advancement. The success of the project has been due to that factor and to the generosity of the physicians, both within and outside the state, who have contributed so generously of their time and efforts in presenting these courses.

The Bureau has served forty-three individual counties in arranging at least one program of the county medical society; has helped five counties with three programs; two counties with two programs, and one county with four programs. Two programs were arranged for the Postgraduate Medical Society of Southwestern Iowa. Arrangements for district meetings in four of the councilor districts were made through the Bureau. The Bureau planned the program for the annual meeting of the Iowa Heart Association and planned the programs for twenty-three clinics sponsored by the Iowa Tuberculosis Association. These clinics were held as regular meetings of the county medical society upon the invitation of one of the officers. Two hundred ninety-one lung patients were examined. Histories of the cases were presented by the patients' family physicians. Forty-one active cases of tuberculosis were reported and twenty-one patients were referred to sanatoria.

Two hundred thirty-one heart patients were examined. Three hundred twenty-two physicians and visitors attended the afternoon clinics. Noon or evening medical meetings were held before or following the clinic, at which the clinicians gave talks on heart and lung diseases. One hundred sixty-eight speakers were sent to these various meetings.

The Speakers Bureau cooperated in every possible way with the arrangements committee in planning the scientific programs and exhibits for the annual meeting of the State Society, the Secretary of the Bureau acting as Secretary of the Arrangements Committee.

The activities so far mentioned constitute the scientific phase of the educational program of the Speakers Bureau. The remainder of the program is devoted to the instruction of the general public in matters of health and preventive medicine. This is a definite responsibility of the medical profession, as they are the ones best qualified to give the laity the true facts.

The radio has proved probably the greatest agency for reaching the public with our health messages. Through the courtesy of radio stations WOI and WSUI our weekly broadcasting periods were continued. This enabled the Bureau to broadcast fifty-two talks on preventive medicine and health matters of local interest. These talks are prepared and presented by members of the state society, carefully edited and approved by a censorship committee before being given. There are requests from an average of fifty people a week for copies of these talks, which would indicate that we have a radio audience of about 50,000. Copies are sent to those requesting them, at the nominal cost of less than three cents a copy. Many requests state that these talks are wanted for programs for parent-teacher associations, women's clubs, etc., showing that these health messages have a far-reaching effect. One county medical society outside the state requested copies of our talks in order that they might rebroadcast them over their local station.

During the year letters were sent to the various service clubs, parent-teacher associations, women's clubs, etc., reminding them that the Bureau is always ready to give them assistance on their health programs. One hundred five speakers were sent to give health talks to lay audiences. Fifty-two of these were radio talks; the other fifty-three were given to the following groups: Rotary Clubs; Parent-Teacher Associations; City, County and District Federated Women's Clubs; Literary Circles; Rural School Meetings; Community Clubs; Sunday Schools; Colleges; Lions Clubs; Business and Professional Women's Clubs; Chambers of Commerce and Kiwanis Clubs, reaching approximately 4,500 people.

In addition to these lay groups, the Bureau has established contacts with two professional groups by sending speakers to all of the district meetings and the annual state meeting of the Iowa Pharmaceutical Association and to two district meetings of the Iowa Nurses' Association.

The Bureau has two lists of speakers—one for scientific and the other for lay groups. There are approximately 150 speakers on each of these lists. One hundred of this number have actually been sent out to scientific meetings and about one hundred ten of the one hundred fifty speakers for lay groups have been used. These lists are being continually revised, corrected, and added to in accordance with reports and recommendations sent in by the officers of the various medical societies.

A page in the Journal each month, entitled "Speakers Bureau Activities" is written to acquaint the members of the Iowa State Medical Society with the progress of the Bureau. Suggestions are often made for county medical society programs and any outstanding activity or program of any medical society which has come to the attention of the Bureau is noted on this page. Under the caption "Meeting of Merit" the Bureau prints from time to time an outstanding meeting held recently. Several counties have had their meetings written up in this place of honor.

The Bureau is always glad to give members whatever assistance is possible in the typing, writing, or preparing of speeches or looking up material for talks.

The financial statement of the Speakers Bureau for the year 1932 is as follows:

Income:		
Fees	$2,610	
Traveling expenses	195.58	$2,805.58
Expenditures:		
Traveling expenses	$ 609.76	
Committee $189.00		
Speakers 420.76		
Printing and stationery	273.94	
Postgraduate courses	3,470.48	
Office supplies	9.75	
Miscellaneous	8.50	
Salary	1,380.00	
Telephone and telegraph	103.27	$5,855.70
		2,805.58
Excess of expenditures over income		$3,050.12

This shows that the expenditures of the Bureau during 1932 were $3,050.12 in excess of its income. However, a bill for $1,799.07 was included in 1932 expenditures which should have been included in 1931 as it was in payment of the expenses of the University Extension courses for that year. The courses were completed in December and the bill for the expenses did not come through until January. Deducting this amount:

$3,050.12
1,799.07
$1,251.05

we see that the expenses in 1932 were still $1,251.05 more than the income. This does not mean that

there is a deficit of that amount in the Speakers Bureau account, however. The income and expenditures of the Bureau previous to 1932 were such that there remained in the Bureau account an unspent income of $2,463.11. Subtracting this unspent income from the amount the expenditures exceeded income in 1932, the Bureau has cost the Iowa State Medical Society only $587.01 for the entire time it has been in operation.

	Income	Expend.	Profit	Loss
1930	$2,780.00	$ 306.26	$2,473.74	
1931	3,939.34	3,949.97		$ 10.63
1932	2,805.58	5,855.70		3,050.12
				$ 587.01

Call this a loss, or a deficit if you like. We of the Speakers Bureau prefer to call it the amount that the Iowa State Medical Society has invested in a health educational program in Iowa for two and a half years.

The Speakers Bureau Committee feels that a definite amount of money should be set aside for this educational work and that the whole brunt of the expenses of such a program should not be borne by those who are progressive enough to take the postgraduate work offered by the Speakers Bureau. If the Speakers Bureau is forced to continue on a self-supporting basis, this is what will happen.

The Speakers Bureau has invaded every corner of the state—by sending speakers to a county medical society, a local parent-teacher association, a radio talk, or drawing doctors from that locality to a district meeting or postgraduate work. It is not necessary to ask for the support of the members of the Iowa State Medical Society. The work of the Bureau is dependent on the good will, support and work of the doctors through the state, in the College of Medicine and in other states. To their efforts we attribute the success of our Bureau. The activities of the Speakers Bureau represent the activities of the members of the Society. As long as the profession in Iowa is awake and active, just so long will the Speakers Bureau continue to operate successfully.

D. J. Glomset, Chairman.

Dr. Glomset made the following supplementary report:

Supplementary Report of Speakers Bureau Committee

The Speakers Bureau has been unusually active during the first four months of 1933. Postgraduate courses are usually begun in the fall but several localities had expressed an interest in a course and as a result, the Bureau organized three courses, which began the first part of March. A course on Neurology and Psychiatry was arranged for the Boone-Story medical societies and 44 members took the course. A course on Diseases of Metabolism and Endocrinology was conducted at Mason City for the men in that locality, with an enrollment of 45. The remaining course was one on "Fundamentals of Medicine," given at Waterloo. Through the efforts of Drs. T. U. McManus and L. C. Kern, and some of the other men at Waterloo, 125 doctors were enrolled for this course. Enthusiastic reports have come from members at all three centers.

Our radio program is being continued. Eighteen talks have been given since the first of the year. The Bureau would like to take this opportunity to express its appreciation of the cooperation of Dr. J. F. Edwards and his staff at the Iowa State College at Ames and of Dr. M. E. Barnes and his staff at the State University in carrying out our broadcasting activities.

Eight clinics were conducted; two district meetings planned; the annual meeting of the Iowa Heart Association was arranged; various programs were planned for county medical societies; and speakers have been sent to several Parent-Teacher Associations, Kiwanis Clubs, Rotary Clubs and Women's Clubs. The Speakers Bureau was asked to furnish a speaker for the program of the Iowa State Pharmaceutical Association annual meeting. In carrying out these activities, the Bureau has sent 76 speakers to 46 scientific meetings and 40 speakers to address 34 lay groups.

The Bureau has continued its cooperation with the Arrangement Committee in planning this annual meeting.

The financial statement of the Bureau covering this period is:

Income:		
Fees	$1,656.16	
Trav. Exp.	34.74	$1,690.90
Expenditures:		
Salary	$ 460.00	
Tel. & Tel.	30.99	
Miscellaneous	15.00	
Trav. Exp.	216.54	
Postgraduate course exp.	258.40	$ 980.93

This shows that the Bureau has not only a profit of $709.97 so far in 1933, but in addition has not had to use any of the money the Trustees budgeted for this department.

The account of the Speakers Bureau from the time of its inauguration is:

Year	Income	Expenditures
1930	$2,780.00	$ 306.26
1931	3,939.34	3,949.97
1932	2,805.58	5,855.70
1933	1,690.90	980.93
	$11,215.82	$11,092.86
Net profit		$ 122.96

The Speakers Bureau Committee takes pride in pointing out that after conducting a heavy schedule of activities and paying all of its own expenses for three years, the Bureau has not cost the Iowa State

Medical Society one cent, but has added $122.96 to its funds.

Dr. Glomset *moved* that the report of the Speakers Bureau Committee be accepted. *Motion seconded and carried.*

Report of the Committee on Cancer Literature

To the Council of the Iowa State Medical Society:

I wish to submit the following report upon cancer activities in the state during the past year. As an opportunity was afforded us through the "American Society for the Control of Cancer" of having a survey made of the various factors entering into the cancer problem of our state, other activities were held largely in abeyance until the results of this survey should appear. Through the acceptance by the Council as well as by the then officers of our Society of the proffered services of the aforementioned Society, it delegated its Field Representative, Dr. Rector, to make such a survey. After spending five or six months in our state, visiting all its hospitals (at least the larger ones) and many members of our profession, and analyzing our vital statistics, aided by our Commissioner of Health, Dr. Rector issued his report the latter part of 1932. The same is exhaustive and very enlightening in regard to the cancer problems of our state, and presents information as well as suggestions which will be most valuable to us in solving our problems in connection with this disease.

While I may not burden you with a comprehensive analysis of the report, there are certain phases of it that I feel should come to your attention and receive earnest consideration. Since cancer, next to heart disease, is the outstanding cause of death, a death which may be averted in the larger per cent of cases, through early recognition and appropriate treatment, it becomes incumbent upon our Society, acting for the profession, to consider means for extending to our inhabitants the fullest measure of aid which our profession may render. To this end it is necessary:

First. To provide for means of getting to possible sufferers from this disease, knowledge of the danger which they incur.

Second. To so organize our professional activities as to ensure for them an optimum of services. To outline in detail, methods whereby our Society may function so as to discharge the foregoing implied obligations, would, I fear, carry this report to a length beyond that which the Society will find time to devote to it. I would therefore suggest that the Society pass a resolution to the effect that the Society create a Committee on Cancer Activities; said Committee to function for the Society in all matters pertaining to the cancer problem; this said Committee to consist of the Councilors in the interest of the Society, discharging to these unfortunate patients their fullest obligations. It is hoped that they may be willing to accept of this added duty.

William Jepson, M.D., Chairman.

In the absence of Dr. Jepson, Dr. Frank M. Fuller, of Keokuk, a member of the committee, *moved* that the report as published in the handbook be accepted. *Motion seconded and carried.*

Committee on Newspaper Publicity

Dr. C. A. Boice, Chairman of the committee, presented the following report:

1. The Committee suggests that no recommendations be given any advertising agency to solicit advertising contracts from county societies.

2. The Committee does not recommend the plan as presented by the Fairall Agency for newspaper publicity.

3. The Committee does recommend that steps be taken to furnish medical articles to the public press.

a. Brief articles, to be written by Iowa medical men. At least one article a week to be prepared.

b. The said articles to be put in proper newspaper style, employing a newspaper man for this purpose if it be deemed necessary. This would be the only outside expense.

c. The prepared articles to be mimeographed and mailed from the State Society office to 100 or more newspapers per week, or oftener.

d. A committee to be named and authorized to proceed as soon as finances warrant.

C. A. Boice, Chairman.

Dr. Boice *moved* that the report of the committee be accepted. *Motion seconded and carried.*

Committee on Professional Relations

Dr. Prince E. Sawyer, of Sioux City, chairman of the committee, presented the following report, and recommended that it be taken under advisement by the Council before its final adoption:

Council of the Iowa State Medical Society:

I wish to submit the following very brief report of the activities of the Professional Relations Committee during the past year.

We thought it wise not to do anything in regard to this committee until after the November election, and we were then rather slow in getting started, but finally perfected an organization in Woodbury County and named it the Woodbury County Inter-Professional Health Association. A constitution and by-laws were adopted and were mailed to Dr. Boice. Dr. Brock, a member of this committee, organized O'Brien County on March 21. This matter was presented to a district meeting of the Eleventh District, but up to this time, an organization has not been perfected.

We recommend that the Council take this matter under advisement and before anything further is done, decide how many of these organizations they want in the state. The Committee recommends that if it is decided to go on with the organization, not more than one for each senatorial district be allowed.

Prince E. Sawyer, Chairman.

Dr. Boice *moved* that the report be received. *Motion seconded and carried.*

President Bowen called for the report of the Committee on Public Relations, but the chairman, Dr. Bierring, was not present.

REPORTS FROM COUNCILOR DISTRICTS

First Councilor District

All things considered, this Councilor district has carried on very well during the past year. One district meeting was held at Charles City, and it was our intention to have another in the eastern part of the district.

One extension course was held in the district and two others are now in progress, contiguous to our district, and it is a compliment to the doctors of this district that men from every county have taken either extension or graduate work during the past year.

I am deeply grateful to all officers and members for their kindly cooperation, and will always be glad to receive frank constructive criticism.

F. A. Hennessy, Councilor.

Allamakee County. Allamakee County had ten members during the past year. On October 25 we held a meeting at Postville, to which we invited the members of the three neighboring counties, Clayton, Fayette and Winneshiek. The program was given by Drs. Hans Haumeder, of New Hampton, W. E. Bannon, of La Crosse, Wisconsin, and C. F. Dixon, of Rochester, Minnesota.

Willard W. Wall, M.D., a graduate of the Wisconsin Medical School, has started practicing in Harper's Ferry, and we were pleased to accept his application for membership in the Allamakee County society.

The following members from Allamakee County attended the extension course given at West Union last fall: C. W. Rominger, M.D., R. R. Jeffries, M.D., and J. G. Schmidt, M.D.

The Study Club which holds one meeting a month at Strawberry Point is one of the most interesting meetings in this section. A. A. Schmidt, M.D., and J. G. Schmidt, M.D., of Allamakee County, take part in the Club.

J. D. Schmidt, Secretary.

Bremer County. On February 19 a meeting was held at Waverly, which was attended by nearly all of the members of the county society. The speakers were Newton D. Smith, M.D., of Rochester, Minnesota, and Robert L. Parker, M.D., of Des Moines.

On April 28 a meeting was held at Readlyn, which was also well attended. The speakers were Professor Swenson, of Wartburg College, Waverly, who spoke on "The Chemical Phases of Heredity"; and F. R. Sparks, M.D., of Waverly, who read a paper on "Heredity."

On June 3 the society again met at Waverly. At this time the speaker was L. C. Kern, M.D., of Waverly, who gave a report of the activities of the delegates to the annual session.

On July 19 the annual picnic was held at Frederika, the doctors and their wives enjoying a day and evening in the park at Frederika. No business was transacted, but the members had a general good time.

On December 14 the society held its annual banquet at Waverly. The banquet was furnished by the Sisters of Mercy in the nurses' dining room at Mercy Hospital. The speakers were Father Collins, of Waverly, and H. W. Rathe, M.D., of Waverly. The latter spoke on "Coronary Heart Disease". Officers were elected for the ensuing year.

Our membership has remained exactly the same. The Bremer County Medical Society is in a very active and healthy condition, with only one eligible physician in the county who is not a member.

F. R. Sparks, Deputy Councilor.

Chickasaw County. I am glad to report that the Chickasaw County Medical Society has been meeting the last Friday evening of every month. We have had some very interesting programs.

We have no auxiliary in this county.

Paul E. Gardner, Deputy Councilor.

Clayton County. The Clayton County Medical Society held two meetings during the past year, both of a business nature.

Two group meetings with other counties were held, with outside men on the programs. These were attended largely by physicians from this county.

Several physicians of the county attend monthly meetings of the Study Club, given in conjunction with two other counties.

Seven physicians of the county society, of a total membership of fifteen, availed themselves of the services of the extension course given at West Union last autumn.

J. D. Hudek, Deputy Councilor.

Fayette County. On May 5 a meeting was held at Fayette. A. F. Fritchen, M.D., of Decorah, spoke on "The Future Care of Our Soldiers", and R. A. Stewart, M.D., of Independence, read a paper on "Neurosyphilis".

On June 7 the members of the society were the guests of Dr. J. M. Smittle of Waucoma. C. K. Maytum, M.D., of the Mayo Clinic, Rochester, presented a paper, "Some Practical Points in the Diagnosis of Asthma".

The July 5 meeting of the society was held at Oelwein. F. P. McNamara, M.D., of Dubuque, spoke on "Some Unusual Pediatric Cases" and C. E. Van Epps, M.D., of the University of Iowa, conducted a neurological clinic.

On August 2 a meeting was held at Clermont, at which L. E. Cooley, M.D., of Dubuque, conducted a cardiac clinic, and L. C. Kern, M.D., of Waverly, presented a paper, "Case Histories and Records".

On September 6 the society again met at Oelwein. The speakers were Charles E. Irwin, M.D., of Cedar Rapids, who read a paper, "Treatment of Hyperthyroidism by Medical Management", and T. N. Walsh, M.D., of Hawkeye, who presented "Some Important Diagnostic Factors".

We had one joint meeting with the Allamakee, Clayton and Winneshiek county societies. There were two district meetings, one at Charles City and one at Postville. Meetings of the Study Club were held each month from January to November, when the meetings were discontinued so that the members

might enjoy the extension course in obstetrics, pediatrics and surgery. Fourteen of the thirty physicians of the county took the extension course at West Union during November and December.

C. C. Hall, Deputy Councilor.

Floyd County. The Floyd County Medical Society has held monthly scientific meetings. During half of the year the programs are presented by our own men and the other half is given over to physicians from Iowa City, Rochester, and so forth.

A very well attended and valuable heart and chest clinic was conducted in the fall.

A district scientific meeting was held at Charles City.

The men are cooperating well and things are going smoothly in Floyd County.

Ray A. Fox, Deputy Councilor.

Howard County. The Howard County Medical Society held its annual meeting during the last week in December. Two of the members enrolled for extension work during the year.

Our auxiliary is organized and I believe will be active.

Wm. A. Bockoven, Deputy Councilor.

Mitchell County. The meetings held in Mitchell County during 1932 were for the most part impromptu; to aid in legislative matters by sending a delegate to Des Moines, or to take economic measures demanded by local conditions. These latter meetings were attended by any member of the medical profession without regard to his membership in the Mitchell County Medical Society.

The small number of meetings was the result of our losing four of our members, apparently because of economic conditions.

Officers were elected at the annual meeting in December.

We hope this year to recapture some of our lost members and to have scientific meetings regularly.

T. S. Walker, Deputy Councilor.

Winneshiek County. During the past year nine members of the Winneshiek County Medical Society attended the post-graduate course held at West Union. All were regular attendants and all felt that much good was derived from the meetings.

All members of the county medical society are members of the Decorah Hospital Staff, whose aim is to have the hospital accredited by the American College of Surgeons. Consequently much of the activity in the organization is correlated, creating greater enthusiasm for organized medicine.

A. F. Fritchen, Deputy Councilor.

Dr. Felix Hennessy *moved* that the report of the Councilor from the first district be accepted as printed in the handbook. *Motion seconded and carried.*

Second Councilor District

The interest of the physicians of this district has been maintained throughout 1932. About forty-seven physicians in the district failed to pay their dues, but this was due largely to the financial depression and not to lack of interest in organized medicine.

The Councilor of the district called a meeting of the Deputy Councilors during the summer to outline the work which we hoped to accomplish during the year. At this meeting it was agreed that in this district the best means of stimulating scientific interest was through district meetings rather than trying to have the smaller counties have scientific meetings in their own county societies. It was decided to have four meetings at different places in the district. We have had three. We had two meetings at Mason City, one at Clarion and a fourth, which was to have been held at Hampton, was postponed because of the postgraduate course which is now in progress in Mason City. At these district meetings, the programs are given by the young men of the district, not using any imported talent at all. We have had a number of very good papers prepared and the discussions of these papers have been excellent. We feel that the district meetings have been a very distinct benefit in a scientific way.

The physicians of the district petitioned for a postgraduate course which was prepared by the Speakers Bureau and is now in progress in Mason City. About fifty physicians of the district are taking this course. The Councilor feels that in a scientific way, very definite advancement has been made during the past year.

For purposes of organization, while we have not visited every county society, we have had contact with physicians of every county through the district meetings. We have visited county society meetings in Cerro Gordo County, Franklin County, the Hancock-Winnebago Society, Kossuth and Worth counties. We have tried to get the organization resuscitated in Humboldt County. In Cerro Gordo County, the law enforcement division received an adverse decision in the Miller case but it is to be carried on to the Supreme Court.

We attempted to get a county contract for care of indigents in Worth County, but failed this year. We hope to succeed next year.

L. R. Woodward, Councilor.

Dr. Woodward *moved* that the report of the Council from the second district be accepted as printed in the handbook. *Motion seconded and carried.*

Third Councilor District

The county societies in the third district have been more active during the past year than heretofore. I have personally visited eight of the nine counties, and may be privileged to meet with the Pocahontas County society before this report is presented, making my attendance one hundred per cent. I am pleased to report that most of the counties have had an increase in interest in county as well as state society activities. Some of the societies have had unusually good scientific programs with good attendance.

The Northwest Iowa District Society has had two meetings at Sheldon, and the Upper Des Moines Dis-

trict Society has had two meetings, one at Estherville and one at Okoboji Lake, during the year. All of these meetings were well attended and splendid scientific programs were presented.

A meeting of the Third Councilor District was called October 3 at the Tangney Hotel in Spencer. A very fine program was arranged. Dr. C. A. Boice, secretary of the Council, gave a splendid paper on "The Past, Present and Future of the Iowa State Medical Society". This was intensely interesting and much appreciated by all present. Dr. L. R. Woodward, chairman of the Council, and Dr. William Jepson, of Sioux City, were also on the program. Forty physicians from the district were present and a goodly number took an active part in the discussion.

The O'Brien County Inter-Professional Health Association was organized March 21, 1933, at Primghar. Fifty-five pharmacists, dentists, veterinarians, nurses and physicians were in attendance. This organization was sponsored by the Professional Relations Committee. Dr. W. R. Brock, who is a member of this committee, acted as organizer and presented a splendid paper on the purposes of the organization. This is the second unit organized in the state and Dr. Brock and the O'Brien County Medical Society should be congratulated upon their worth-while effort.

Deaths reported during the year were as follows: Dr. D. G. Lass, Ocheyedan, February 4, 1933, aged seventy-five years; Dr. R. C. Coleman, Estherville, January 7, 1933; Dr. James W. Beck, of Gruver; Dr. Richard Huizenga, of Rock Valley.

The following physicians have located in the third district during the past year: Dr. Harold W. Schoon, a graduate of the College of Medicine of the State University of Iowa in 1931, located at Sibley March 23, 1933. Dr. O. H. Miller located at Wallingford in February, 1933. Dr. J. P. Clark, who was formerly working for Dr. Coleman, has definitely located at Estherville. Dr. G. R. McCutcheon, of Grand Island, Nebraska, and Dr. George M. de Young, of Orange City, have both located recently at George. Dr. E. J. Bild, who was formerly located at Doon and moved to Nebraska, has recently returned to Doon and resumed his former practice. Dr. J. M. Fettes, Dr. A. M. Sonneland, Dr. Dean Harold King and Dr. Roman Fish have all located at Spencer. Dr. Knute Sporre moved from Harris to Rock Rapids in March, 1932. Dr. F. E. Chalmers, who has been located at George for the past twenty-five years, is in a hospital at Sioux Falls, South Dakota, convalescing from a serious surgical operation. Dr. Chalmers has been absent from his practice for more than three months.

The medical profession in the third district has been greatly interested in bringing about needed revisions in the present Perkins, Haskell-Klaus laws.

One complaint has been filed with the Councilor from Emmet County, relative to certain tonsil clinics. This matter has been satisfactorily adjusted. A fine feeling of fellowship exists among the members and all are very willing to cooperate with the state society in all of its activities.

Frank P. Winkler, Councilor.

Dr. Frank M. Fuller, of Keokuk, *moved* that if there be no objection, the reports from all the remaining Councilor districts be accepted as printed in the handbook. *Motion seconded and carried.*

Fourth Councilor District

Owing to the fact that I have only acted as Councilor for the fourth district for the past four months, it has taken about that much time to familiarize myself with the duties expected of a Councilor.

I have contacted several county societies and participated in discussions of the general political situation, particularly with reference to pending bills that might be inimical to the medical profession.

We had a joint meeting in Sioux City on January 24 of the third and fourth districts, with a very good attendance and practically every county represented. All who attended were greatly interested, as evidenced by the number of subjects discussed and the attention given the proposed revision of the Perkins, Haskell-Klaus laws and the bills pending in the state legislature. We have held several of these joint meetings at the time of the Sioux Valley Medical Society meeting, thus making it convenient for representatives of the county societies to attend both meetings.

The Crawford County Medical Society has adopted an excellent method of holding monthly meetings. The surplus from the county society contract is used for holding scientific meetings, at which both outside and local talent are presented. The society has had some excellent programs this winter. I would suggest to other counties having the county contract plan for the care of the indigent sick, that any surplus accumulated could not be used for any better purpose toward the advancement of scientific medicine.

James E. Reeder, Councilor.

Fifth Councilor District

The following is the report of the Councilor for the Fifth District of the Iowa State Medical Society:

It has been the Councilor's pleasure to attend the meetings of the Councilors with, I believe, but two exceptions—one instance being unavoidable, and the other occasioned by an oversight in the date.

Your Councilor has been impressed by the fact that the chairman is most efficient and that the members of the Council are very active in the interest of the Society. (See opposite page.)

William W. Pearson, Councilor.

Sixth Councilor District

Your Board of Trustees appointed me as Councilor for the Sixth District, to succeed the late Dr. W. L. Hearst.

Under his most conscientious and efficient service, everything has been moving along so smoothly in the

County	Paid Members	Unpaid	Number of Meetings	County Poor Work	Activities	Remarks
Boone (Mark C. Jones)	22		12 plus 2 picnics	Working under county contract with board of supervisors. Renewed contract for coming year.	Oct. 20 to March 2, joint meetings held with Story County at which program by two members was given. March 2 began series of ten lectures through Speakers Bureau of State Society given by physicians from Des Moines, University of Iowa and Rochester.	
Story (Earl B. Bush)	12 (8 more promised)		See Boone County report		Meetings combined with Boone Co. were well attended. Believe the plan of alternating between Boone and Ames has created a decided improvement in attendance and this, of course, tends to make programs better and gives better esprit de corps.	Unpaid memberships are result of lack of money. Entire medical society funds tied up in closed bank. Membership will eventually be more satisfactory.
Dallas and Guthrie (E. J. Butterfield & S. J. Brown)	27 (Guthrie 15) (Dallas 12)				Meetings held quarterly. The July meeting was a picnic held at Woodward. Program for October meeting arranged by Speakers Bureau. A few of the Dallas County members took post-graduate course arranged by Speakers Bureau in Des Moines last fall.	Paid memberships in Dallas County fallen off badly. Guthrie County membership one hundred per cent. All meetings well attended. Members interested and enthusiastic.
Greene (B. C. Hamilton, Jr.)	12	3			Held three program meetings and one business meeting. Attended Twin Lakes District meeting. Several members attended study course at Carroll. Members at Jefferson conducted Summer Round-up at Grade Schools. Members in county conducted 4-H examinations.	Program meetings so poorly attended they were discontinued. Reason — members attracted to other meetings at Carroll, Fort Dodge and Boone.
Hamilton (M. B. Galloway)	20	Two who have not signed contract and are not considered members. Dr. Buxton, Webster City Dr. Boody of Williams		Have contract with county supervisors to care for indigent poor. Paid $4,000.00 a year in quarterly payments.		Dues (state society) paid from $4,000.00 fund received from county supervisors. This satisfactory to all but three members who think more money should be paid for the amount of work done. Supervisors are much pleased. State society has copy of contract. Malpractice Ins. for all members is paid by $4,000.00 fund.
Calhoun (P. W. Van Metre)	Hope to have 100% when settled — see remarks				Held four meetings including a chest and lung clinic.	Membership dues held up because it has not been decided whether dues of all shall be deducted from amt. received for medical services to indigents. Settlement in hand of Dr. W. McCrary
Webster (Roland Stahr)	29			Early in year 1933 made new contract with board of supervisors for care of poor; remuneration increased but not adequate. County now furnishes medicine and biological products used in treatment. This change has been satisfactory to most members.	Held ten meetings. Attendance and interest excellent.	Society lost one of its oldest and most respected members in the death of Dr. R. E. Evans who retired but a short time before his death.
Polk (Ralph Parker)	246 (213 active 33 associate)	13 dropped 8 died (all but 2 of latter were active) 9 lost by transfer 12 gained by transfer and election			Eight regular meetings were held with average attendance of 110 members; the scientific programs for these meetings was furnished by twelve society members and four guest speakers. Section on Ophthal. and Oto-Laryng. held four meetings which were addressed by seven local speakers and one guest speaker. This Section also sponsored post-graduate course in the Fundamentals of Medicine. Regular meetings of the society were suspended during this course. Sixty men participated in the meetings and from 40 to 45 attended each meeting.	Regular meetings made more attractive by a social hour which follows the scientific meeting; during this social hour refreshments were served (until finances would not permit), motion pictures were shown and cards were played by those who wished.

County	Paid Members	Unpaid	Number of Meetings	County Poor Work	Activities	Remarks
					Section on Experimental Medicine held one meeting which was addressed by Dr. A. I. Kendall of Northwestern University. In November a Medico-Dental meeting was held. A luncheon meeting was held for Dr. Cary. In December the annual meeting was held. Council and Board of Trustees held regular monthly meetings and several extra sessions. Public Relations, Public Health and Legislative Committees were active in solving problems of local interest. The society has inaugurated a Credit Reference Bureau in which 60 members have cooperated; all members of the society are eligible to this service. Telephone Call Service is maintained by the society; this has been placed on a more equitable basis and 60 to 70 members benefit by it each month. County society continues to publish the Bulletin; in this was published a specialty classification list. In it also was published a medical history of Polk County written by Dr. Bierring which probably is the only record of medical history in available form. Members interested in golf had series of four tournaments during the summer. Society maintains executive office and lay secretary through which medium various contacts and duties are performed of benefit to the society, its members and medical affairs in general.	

nine counties of the Sixth District, that it has been a pleasure to try to carry out his plans so far as they were known. Starting with these duties early in the year, with the programs pretty well set for January and February, it was thought advisable to call no district meeting until after the Polk County Medical Society had held its special meeting on the report of the Committee on the Costs of Medical Care and after the physicians in the district had taken sufficient time to study the problem intelligently. During this time a large volume of correspondence was carried on in connection with legislative problems and the making of personal contacts with our legislators and the arranging of joint district meetings to be held later.

On March 7 a joint district and Marshall County Medical Society meeting was arranged with Deputy Councilor R. S. Grossman at the Hotel Tallcorn in Marshalltown. Seventy-five physicians from all over the district were present. Dr. A. R. Hollender, of Chicago, presented an excellent scientific paper on "Otolaryngology Problems of Interest to the General Practitioner". Dr. Joseph Brown, of Des Moines, discussed the report of the Committee on the Costs of Medical Care, and Dr. Robert L. Parker, of Des Moines, gave a report on pending legislative activities. The first speaker had previously been invited as the guest of the Marshall County Society for its regular meeting on that date, and the two succeeding speakers were provided by the Speakers Bureau of the state society. A very interesting comment on the Perkins, Haskell-Klaus laws was presented by Dr. E. B. Williams, of Montezuma, and the discussion on this and other subjects of interest to the physicians made a most interesting and profitable evening.

I heartily agree with the late Dr. Hearst in his last year's report regarding these meetings. In unity there is strength and there certainly is a greater sense of unity developed in gathering together at such meetings than by any other means. I feel that from two to four of these meetings should be held at various points in each district during the year. There should be from one to three local essayists, with one outside man furnished by the Speakers Bureau of the state society. The state society should share the responsibility and cost of furnishing an outside speaker, as at present, and the local society should be at no greater expense or trouble than is necessary for a good local dinner meeting.

This would put the smaller county societies on the same basis as the larger, and the Councilor would

not feel that he was intruding in a county where a district meeting might be advisable.

In the counties of smaller population the Deputy Councilors have seemed timid in reporting their actual society activities. I know, from personal contact, that the district and the individual societies have been functioning as nearly normally as possible, considering the existing conditions.

Contracts for the care of the indigent sick have been generally renewed. The percentage of membership in counties with contracts has held close to one hundred per cent, but has slipped five to ten per cent in smaller counties without contracts. Too many of the members, owing to bank holidays, poor collections and other conditions due to the depression, are not keeping up their dues and interest in their professional activities as they should.

The Marshall County Medical Society is especially to be commended for its high type of monthly programs, including the joint district meeting previously mentioned.

The Black Hawk County Medical Society has been especially active in reorganizing its two strong city societies and its county society into one strong county unit, with a county contract for the care of the indigent sick and group insurance covering the members serving under the contract. The Cedar Falls Society retains its charter for laboratory and staff purposes and the Waterloo Society continues only as a holding society, its chief interest being in the beautiful clubhouse, Wameso Lodge, located on the Cedar River bluffs between Cedar Falls and Waterloo, as pictured and described in the February issue of the Journal.

The newly organized Black Hawk County Medical Society, during the spring months of 1933, put on a wonderful educational program in the form of ten weekly lectures on "The Fundamentals of Medicine". Each lecture was given by a recognized authority. The course was arranged by the Speakers Bureau, and over one hundred and twenty physicians were registered.

The balance of the counties in the Sixth District report about the same activities, meetings and memberships as last year, with a tendency on the part of the members in the smaller societies to attend the larger group or district meetings.

The excellent cooperation of the Deputy Councilors and the other county and state society officers has been especially appreciated.

C. W. Ellyson, Councilor.

Benton County. The Benton County Medical Society has held its usual meetings during the year. The society has been harmonious in its activities, but its members have preferred to attend the larger nearby group meetings for scientific programs, such as the meetings at Cedar Rapids, Marshalltown and Waterloo.

J. E. Luckey, Deputy Councilor.

Black Hawk County. The Black Hawk County Medical Society during recent months has gone through a series of special meetings that have been secondary only to the Bank Holiday programs. Every physician in Cedar Falls, Waterloo and the surrounding territory within the county has seemed conscientiously desirous of helping to build a strong, actively functioning scientific and official medical society in Black Hawk County. There never was a finer display of cooperative and constructive medical teamwork than that shown in the reorganization work in this county.

Until very recently there were three medical societies and four hospital staff meetings in this county. The medical societies were: the Waterloo Medical Society, the Cedar Falls Medical Society and the Black Hawk County Medical Society. The Waterloo Medical Society was a very creditable and active organization, scientifically, socially, and as a business organization, and was really the most representative of any in the county, but because it was not an official unit of the state society and did not embrace the entire county, it was apparently detracting from the duties, functions and interests of our county society, and it was thought best to discontinue it as a scientific society, and for the same reasons it was thought wise to discontinue the Cedar Falls Medical Society. This has been done successfully. The Waterloo Medical Society will continue to exist more or less as a social and holding organization and the Cedar Falls Medical Society will continue as a staff organization for the local hospital.

The Black Hawk County Medical Society meets on the third Tuesday evening of each month throughout the year for scientific programs, and has arranged that it may meet on the first Tuesday for business and special meetings if necessary. Incorporation articles are being drawn up. It has sixty-three members, which represent one hundred per cent of the eligible physicians in the county. Its trustees have just signed a contract with the board of supervisors for the care of the indigent sick in Cedar Falls and Waterloo, with the outside men caring for the indigent in their localities on the former basis.

It has appointed an editorial staff to edit a bulletin which will keep the surrounding physicians posted on its programs and other activities.

During the spring of 1933, the Black Hawk County Medical Society put on a series of ten post-graduate lectures and discussions on "The Fundamentals of Medicine". This was arranged through the Speakers Bureau of the state society and the course continued one evening each week from March 10 to May 19. Over one hundred twenty-five physicians registered. It was a wonderful educational program.

The Black Hawk County Medical Society also hopes to assume the group insurance now held on each member of the Waterloo Medical Society and to enlarge it to cover the group now caring for the indigent in the county.

One of the chief interests of the Waterloo Medical Society is centered in its beautiful Wameso Lodge, situated on the south bluffs of the Cedar River adjoining Cedar Heights Park. For a picture and description of this beautiful lodge, see the Journal

of the Iowa State Medical Society for February, 1933, page 90.

The wives of the physicians of the community hold meetings on the same evenings as the medical meetings and represent an unofficial auxiliary.

A. J. Joynt, Deputy Councilor.

Grundy County. The Grundy County Medical Society holds its meetings in Grundy Center in February, June and September. Most of the members attend the meetings in adjoining counties and as a result the local membership and activities have suffered for lack of interest.

M. H. Thielen, Deputy Councilor.

Hardin County. Bimonthly meetings of the Hardin County Medical Society are held alternately at Iowa Falls and Eldora. There are twenty-four members in the society, which represent over ninety-two per cent of the eligible physicians in the county.

W. E. Marsh, Deputy Councilor.

Iowa County. No report.

Jasper County. The Jasper County Medical Society meets the first Tuesday of each month following a six-thirty dinner at the Shiff Hospital. There are thirty-one members, with four honorary members, representing one hundred per cent of the eligible physicians of the county. A very satisfactory contract is held for the care of the indigent sick.

J. W. Billingsley, Deputy Councilor.

Marshall County. The Marshall County Medical Society meets at the Hotel Tallcorn at six-thirty on the first Tuesday of each month. The membership numbers forty-two, with no delinquents, no eligible non-members and no ineligible non-members. Two members are not in active practice.

The regular monthly meetings have included good scientific programs and in addition to local talent, the following guests have appeared on the programs:

Dr. M. Edward Davis, Chicago, Illinois.
Dr. C. S. O'Brien, Iowa City.
Dr. Arthur Steindler, Iowa City.
Dr. J. B. Synhorst, Des Moines.
Dr. F. W. Mulsow, Cedar Rapids.
Dr. Frank Ely, Des Moines.
Dr. H. B. Henry, Des Moines.
Dr. R. C. Doolittle, Des Moines.
Dr. Joseph Brown, Des Moines.
Dr. Robert L. Parker, Des Moines.
Dr. A. R. Hollender, Chicago, Illinois.

Dr. Brown, Dr. Parker and Dr. Hollender spoke at a joint meeting with the Sixth Councilor District on March 7. Over seventy members attended and a most interesting and profitable evening was spent.

R. S. Grossman, Deputy Councilor.

Poweshiek County. The Poweshiek County Medical Society meets bimonthly, has as its membership one hundred per cent of the eligible physicians of the county, and carries a contract with the board of supervisors. Its meetings have been largely of local interest.

E. E. Harris, Deputy Councilor.

Tama County. No report.

Seventh Councilor District

A majority of the county societies in the Seventh District have continued to show their customary interest in the scientific activities of organized medicine during the past year. The more populous counties, Clinton, Dubuque, Johnson and Linn, have held numerous meetings, which have been well attended, not only by their own members, but by the physicians of the adjoining, less populous counties. Jackson County has not only held regular scientific meetings but has also maintained a high degree of interest in medical politics as they apply to the protection of the public. No district meetings have been held, and the annual dinner of the county officers for the consideration of social and humanitarian aspects of organized medicine was omitted for financial reasons. The post-graduate course at Monticello, sponsored by the Speakers Bureau, was attended by about fifty physicians.

Arthur W. Erskine, Councilor.

Cedar County. The Cedar County Medical Society has had only two meetings during the past year. The physicians find it so much easier to attend society meetings in Davenport, Iowa City, and Cedar Rapids, that only special occasions arouse their interest locally. A few members have dropped out of the society because of sore financial straits. The last meeting of the society was so enjoyable and profitable that the society expects to hold regular meetings next year.

E. J. Van Metre, Deputy Councilor.

Delaware County. Four meetings were called in 1932. There are fifteen eligible members in Delaware County, nine of whom paid their dues for last year. Thus far in 1933 there are only two paid-up members. In view of the present economic conditions, it is doubtful if the society will be able to function.

J. I. Jones, President.

Dubuque County. Membership: The total number of members is fifty-five. Four new members were admitted during the past year. Three members died —Drs. James W. Heustis, John V. Keogh and F. A. Keppler. One member, Dr. G. T. Barcklow, moved to California.

Meetings—

Regular meetings	8	Average attendance	23
Special meetings	6	Average attendance	21
Anniversary meeting	1	Attendance	100

Interest: The interest of those attending the meetings has been good, but as less than fifty per cent attended the meetings the interest for the society as a whole is poor. However, the new officers have caused a definite improvement since the beginning of the present year.

Special Occurrence: The post-graduate course conducted at Monticello by the Speakers Bureau of the state society was considered a great success by the ten men who attended. There is a general feeling that similar courses should be conducted in the future.

F. P. McNamara, Deputy Councilor.

Jackson County. We had our usual four meetings

in 1932, with a scientific program at each meeting. Only one program was furnished by the Speakers Bureau. The attendance at our meetings was about fifty per cent of what it should have been. We have lost two members and gained no new ones.

George C. Ryan, President.

Johnson County. We began the year with a membership of 134. At the close of the year the membership was 140. Average attendance for the year was 80. Ten meetings were held, at each of which scientific programs were given. Eight programs were given entirely by the members of the society. The November meeting was addressed by Dr. John H. Peck, of Des Moines. The July meeting was without scientific program; a picnic being held at the home of the secretary. The attendance and interest during the year continued excellent.

Geo. C. Albright, Deputy Councilor.

Jones County. The Jones County Medical Society meets twice a year, once to hear the report of the delegates and once to elect officers. Fourteen of the eighteen physicians in the county are members of the county society. Many of the members of the Jones County Medical Society also pay a non-resident membership fee to Linn County Medical Society where they attend scientific programs.

T. M. Redmond, Deputy Councilor.

Linn County. The Linn County Medical Society has held regular monthly meetings, beginning September 1 of last year. The following members of the medical profession have appeared on our programs:

Dr. N. G. Alcock, Professor of Urology, University of Iowa.

Dr. Lewis W. Sauer, Professor of Pediatrics, Northwestern University.

Dr. Adolph Sachs, Professor of Medicine, Creighton University, Omaha.

Dr. Geo. W. Crile, Cleveland, Ohio.

Dr. Joseph L. Baer, Professor of Obstetrics and Gynecology, University of Chicago.

Dr. Arthur Steindler, Professor of Orthopedic Surgery, University of Iowa.

Dr. Wm. R. Cubbins, Associate Professor of Orthopedic Surgery, Northwestern University.

Dr. Harold Hays, New York City.

Dr. Joseph Brown, Des Moines.

Dr. Richard Sutton, Kansas City, Missouri.

With each program a paper has been furnished by one of the local members of the society, and free discussions have been obtained by both local and visiting physicians.

A special meeting was held September 29, 1932, at Independence State Hospital by invitation of Dr. R. A. Stewart, superintendent. It was well attended and much appreciated.

There has been an average attendance of 150. The membership has remained about the same, with a total of 94.

The Linn County Medical Society feels that it has enjoyed a very successful and profitable year.

L. M. Downing, Deputy Councilor.

Eighth Councilor District

The report of each Deputy Councilor merits careful reading. I desire to refer briefly to extracts from a few of them:

Louisa County. "The society has not missed monthly meetings for several years and interest is excellent."

Muscatine County. "The meetings are better, more frequent, and secure better interest than in the past; due, we believe, to the county indigent contract."

Van Buren County. "This is the first time in thirty years that every practicing physician in the county has been a member. More cooperation than ever known among the society members."

Ft. Madison Society. "Meetings held regularly each month with more interest than the previous year."

Des Moines County. "Meetings are held regularly each month, interest is good, attendance averages more than seventy per cent of the membership."

Washington County. "Attendance is about ninety per cent and interest one hundred per cent. Dr. E. T. Wickham, who joined the society in 1898 and is now retired on account of poor health, is recommended for life membership."

Scott County. "Ten meetings are held yearly, with an attendance of nearly one hundred per cent. Five hosts furnish the meal each time, which has markedly increased the attendance."

The constitution of the Southeastern Iowa District Medical Society has been amended to include the nine counties of the Councilor district, and the society therefore becomes in effect a district medical society. This society has met yearly since 1875 and has always been, and will doubtless continue to be, a high-grade medical society. There are two health units in the district, in Washington and Des Moines counties.

There are three auxiliaries in the district, in Washington, Muscatine, and Louisa counties. There are three county hospitals, in Washington, Jefferson and Henry counties. These last three named county societies meet in each county once yearly as a tri-county society. This has proved a beneficial move.

All of the counties have had contracts for the care of the indigent sick except Des Moines County and the city of Keokuk in Lee County. The contract in Van Buren County was not renewed for 1933, through no fault of the society. The 300 physicians of the eighth district delivered much more than $120,000.00 worth of service to the indigent in 1932, or about $400.00 per physician, and received approximately $30,000.00 or about $100.00 per physician. This does not include loss of income due to deadbeats, or poor or doubtful pay patients, but includes only service to those who have been certified by the proper authorities as entitled to pauper aid. Five county societies have increased their contracts for 1933; Washington, Scott, Muscatine, Louisa and Jefferson counties. Two have been furnishing biologicals, but in the others the county has furnished them.

There is no justifiable reason why the physicians should carry the major part of the load in the care of the indigent sick and every effort should be made by the county society organization, supplemented by

the state organization, to see that physicians receive reasonable compensation for this work. It is a noteworthy fact that those societies which have a satisfactory financial agreement of this sort with the county authorities have an active membership, frequent and interesting meetings, increasing enthusiasm and approximately one hundred per cent membership in the county and state societies.

Des Moines County. The Des Moines County Medical Society has never had a contract, but the indigent sick in Burlington are cared for by a city physician at a salary of $100.00 a month. An additional fee is paid to the doctor who does surgical work. That part of the county which is outside Burlington is cared for by physicians living in the territory. Venereal diseases are cared for through the health unit. The county furnishes insulin, vaccines, serums and anti-toxins.

One member died during the year 1932, Dr. C. H. Magee. There is one new physician, Dr. Schack. Meetings are held regularly each month, interest is good and attendance averages over seventy per cent of the membership. There are forty-three active practitioners and one retired physician. There has been no increase in the number of osteopaths. The society attempted to obtain a contract for 1933 but was not successful. John T. Hanna, Deputy Councilor.

Henry County. The Henry County Medical Society receives pay for the care of the indigents according to a standard fee bill. The money is all paid to the secretary of the society, who retains ten per cent for society expenses and gives the members ninety per cent. The society members did $2,000.00 worth of work in 1932, for which they received $1,550.00. The contract does not include venereal diseases. It does include surgery, the county home and jail. State society dues are not paid from this fund. The county furnishes insulin, vaccines, anti-toxins and serum when needed. The contract for 1933 continues the same arrangement.

There have been no deaths in the county during the past year and no new physicians. Meetings are held monthly and are very enthusiastic. There are sixteen active practitioners in the county, one retired physician and no increase in left-handed practitioners.

W. A. Sternberg, Deputy Councilor.

Jefferson County. The physicians in Fairfield have a contract which pays them $1,600.00, for which they delivered services to the amount of $8,000.00 in 1932. The contract includes venereal diseases, major and special surgery, the jail, but not the county home. The physicians outside Fairfield do not share in the contract. State society dues are paid, as well as indemnity insurance and all society expenses, and the balance is divided equally among those sharing in the work. The county society has been furnishing insulin, serums and anti-toxins.

There have been no deaths during 1932. There is one new physician in the county. Meetings are held irregularly, but interest is good. There are fifteen active practitioners in the county and three inactive, with no increase in left-handed practitioners.

Ira Nelson Crow, Deputy Councilor.

Lee County (except Fort Madison). There is no contract in force in this area, but the city physician was paid $2,014.50 for the care of the indigent during 1932. Figures for the exact value of the work delivered are not available, but doubtless far exceeded this amount. This fee included venereal diseases and all surgery. Dr. Gilfillan received $776.81 for work at the county jail. The arrangement is continued for 1933. Each doctor pays his own dues to the state society. In Keokuk the county furnishes biologicals and insulin. Medical service to the board of health amounted to $2,168.32, which work was done by Drs. Gilfillan and Diamond. Lee County paid $4,849.00 for hospital and ambulance services at the St. Joseph's Hospital in Keokuk and $1,729.00 at the Graham Hospital, making a total of $6,578.00.

There have been no deaths in Lee County during the past year and no new physicians in Keokuk. Four regular meetings are held yearly and receive active and sustained interest. There are forty-three active physicians in the county, twenty-one of whom are in Keokuk; there is one retired physician; there has been no increase of left-handed practitioners during the year.

F. M. Fuller, Deputy Councilor.

Fort Madison. The Fort Madison physicians have a contract which paid them $2,000.00 in 1932 and for which they delivered medical service to the amount of $4,000.00, including venereal diseases, major surgery and the county jail. Special surgery and the county home are not included. The contract for 1933 will probably be about the same. State society dues and county society expenses are paid and a small dividend is paid to the members. The society has been furnishing anti-toxins, serums, vaccines and insulin, but expects to change this in the new contract. There have been no deaths in Fort Madison and two new physicians have located here during the year. Meetings are held regularly each month with more interest than during the previous year. There are sixteen active practitioners covered by this report and one inactive. There is one new osteopath in Fort Madison.

R. L. Feightner, Deputy Councilor.

Louisa County. In 1932 the Louisa County Medical Society had a contract (its first) for $900.00, for which the society did $1,500.00 worth of work. The contract includes the care of venereal diseases but does not include surgery, the county home or jail. For 1933 the society will draw $1,200.00. State dues and all society expenses are paid and the balance prorated. The county furnishes insulin, vaccines, anti-toxins and serums.

There was one death in the county in 1932, Dr. E. C. Rogers, of Wapello; there are no new physicians. The society has not missed monthly meetings for several years and interest is excellent. There are fourteen active practitioners in the county and two inactive; there has been no increase in left-handed practitioners during the year.

J. H. Chittum, Deputy Councilor.

Muscatine County. In 1932 the Muscatine County Medical Society received on contract $3,600.00 for which service was delivered amounting to $13,877.00. The contract included general practice, venereal diseases, all surgery, the county home and jail. State society dues are paid, all county society expenses, and the balance prorated. The county furnishes insulin, vaccines, anti-toxins and serums. The contract for 1933 calls for $4,800.00.

One new physician, Dr. Jessup, has located in the county since the last annual meeting. The meetings are better, more frequent and evoke more interest than in the past; due, we believe, to the county indigent contract. There are twenty-eight active practitioners in the county and one retired physician. There is one more osteopath than was reported last year and there are two physicians connected with the notorious Baker Institute.

T. F. Beveridge, Deputy Councilor.

Scott County. The Scott County Medical Society had a contract with the board of supervisors amounting to $15,000.00 during 1932, for which work was done to the amount of $60,000.00. The contract includes venereal diseases, surgery and the county home and jail. The venereal clinic and the children's clinic are under the control of the county society, the work being done by specialists in these lines and the city physician is also paid by the society. The dues are paid in part and society expenses are paid and the salaries above mentioned. The county pays for biologicals and artificial limbs. The contract for 1933 calls for $18,600.00.

There were no deaths during the year 1932. There are four new physicians in Davenport. There are ninety-one paid-up active practitioners and about the same number of irregulars as last year. Ten meetings are held annually with an attendance of nearly one hundred per cent. Five hosts furnish the meal each time, which has markedly increased the attendance.

A. P. Donohoe, Deputy Councilor.

Van Buren County. The Van Buren County Medical Society had its first contract in 1932, amounting to $1,400.00, for which general practice amounted to $1,426.00. The contract did not include venereal diseases, surgery, the county home or jail, additional fees being paid for these services. State society dues and county society expenses were paid and the balance prorated. The county furnished insulin, vaccines, serums and anti-toxins. The contract was the most satisfactory plan we have ever had, although it was not renewed because of local politics. For 1933 the society will be paid according to their fee bill. There have been no deaths during the past year. One new physician has located in the county. There are twelve active practitioners, none retired, and two new osteopaths. This is the first time in thirty years that every practicing physician in the county has been a member of the society. There is more cooperation than was ever known among the society members. Meetings are rather infrequent, but draw an attendance of at least seventy-five per cent and much interest is shown.

C. R. Russell, Deputy Councilor.

Washington County. The Washington County Medical Society contract called for $1,800.00 in 1932, for which general practice and obstetrical work was done to the amount of $2,700.00. The contract did not include surgery in any form, the county home or jail, these services amounting to about $1,500.00. State society dues and all county society expenses are paid and the balance prorated. Last year each doctor received in cash fifty per cent of his bill based on the standard fee bill. The county furnishes insulin, anti-toxins, serums and vaccines. The contract for 1933 calls for payment of seventy-five per cent of the fee schedule for the first $2,250.00 and fifty per cent thereafter. The contract does not include venereal diseases (which are cared for under a special arrangement through the health unit), major or minor surgery, county home or jail.

There were no deaths during 1932. There is one new practitioner. Meetings are held monthly and are of a post-graduate nature. Attendance is about ninety per cent and interest about one hundred per cent. There are twenty active practitioners in the county, four inactive or retired, two of whom have never in any way been connected with organized medicine. We are enjoying the consolation of one new chiropractor. Dr. E. T. Wickham has been a member since 1888, and is recommended for life membership.

E. E. Stutsman, Deputy Councilor.

Ninth Councilor District

The Councilor has personally visited all but two of the societies in this district and found an increased interest in Society affairs. There have been no district meetings this year, since it is our belief that the development of active functioning County Societies should precede general district activities. In general, the component societies have tried to have regular meetings at which the programs were presented by their own members. This plan has been developed and successfully carried out in the Wapello County Medical Society under the leadership and direction of the late Dr. John F. Herrick. It is felt that by such a program the individual members of the societies are developed and improved and that the standards of the medical profession in these counties are thereby raised. It is hoped that this plan will be carried out in the near future in all the counties of this district.

Lucas County has adopted a plan of turning over to the County Society the fees received from the examination of indigent patients under the Perkins-Haskell-Klaus Law, and expects thereby to have all eligible physicians in the county as members of the county and state societies.

The situation in Monroe County unfortunately seems to have reached a deadlock. Following the appeal of three of the physicians of that county from the action of the County Society in refusing to accept

their dues, the Councilor referred the case to the Council as a whole. A committee was appointed which reviewed all the documentary evidence in the possession of the State Society and notified the County Society and the physicians who appealed that they had the privilege of submitting any additional evidence before this matter was reported to the Council. No additional information was received. The Council voted to instruct the Monroe County Society to receive the dues of the contesting physicians. To date this has not been done and it will probably be necessary to refer this matter to the House of Delegates.

H. A. Spilman, Councilor

Tenth Councilor District

Insofar as the Councilor for the Tenth District has been able to ascertain, membership, in most instances, has fallen off and several counties that in the past have reported hundred per cent membership for years have fallen below par.

A meeting of the Tenth District Society has not been held during the past year. It is hoped that interest can be stimulated to the point of holding several meetings in the coming year.

The Madison County Medical Society has interesting monthly meetings except during July and August. Talent from other counties is ordinarily used. Clarke, Decatur, Ringgold and Taylor county societies report several county society meetings and four joint meetings of these societies. The attendance was very good and both local and outside talent were used. The Adair County Medical Society reports several meetings with considerable enthusiasm shown. The Union County society has regular monthly meetings which are well attended. Local talent is used almost exclusively. The Adams County society reports very few meetings with rather less than usual interest shown. The Warren County Medical Society is functioning satisfactorily.

Contracts of the county societies with county boards of supervisors for care of the indigent are credited with a degree of cooperation and interest which was formerly lacking.

James G. Macrae, Councilor.

Eleventh Councilor District

Each of the various county societies in the district held from one to ten meetings during the year. These meetings were both business and scientific in nature. The scientific material was furnished by local members and by physicians from within and without the state. Heart and chest clinics were conducted under the auspices of several societies. School immunization and infant welfare were fostered by various county groups.

Several of the county societies have been investigating county contracts for care of the indigent sick and have been giving considerable thought and work to the idea. No contract has been let to date, however, other than that of the Council Bluffs Medical Society. This society has had a contract for the past three years for the sum of $6,500.00 per year. During the first two years the contract was satisfactory to all parties concerned, but the present economic condition of the people of the community has thrown a tremendous burden on both the Society and the county, with the result that the Society does not feel particularly anxious to renew the present form of contract. From its experiences in this endeavor, it feels that probably some such method of handling the indigent sick problem is along the right line and a committee is now at work attempting to draw up a new form of contract which, so far as the financial end is concerned, will be a little more equitable to the profession for services rendered.

One year ago the first district meeting was held at Council Bluffs and plans are in the making for another district meeting to be held at Council Bluffs this month. Discussions at this meeting will include both scientific subjects and medical economic problems. The possibility of forming an inter-professional group was broached to several of the societies, but the reaction was only a manifestation of half-hearted interest.

M. C. Hennessy, Councilor.

Dr. William Jepson, of Sioux City, *moved* that the report of Dr. F. L. Rector upon the cancer situation in Iowa be accepted and preserved with the records of our Society and that Dr. Rector, and through him the American Society for the Control of Cancer, receive our thanks for his services to us in making this very valuable survey and placing the results in our hands, and that the Board of Trustees be requested to make the full report, or as much thereof as it may deem advisable, available to the profession of our state through publication in the JOURNAL OF THE IOWA STATE MEDICAL SOCIETY or a supplement thereof. *The motion was seconded by Dr. Erskine and carried.*

Dr. Jepson further *moved* that as cancer is constantly on the increase within our state, and now being one of the outstanding diseases afflicting our people, we recognize that it becomes the duty of our profession to promote such activities as shall have for their object the study and prevention of this disease. Therefore, we assembled in the House of Delegates do hereby create a Committee to be known as "The Cancer Committee" and whose membership shall consist of the Councilors of the Iowa State Medical Society and the State Chairman of the American Society for the Control of Cancer; said committee to function for our Society in respect to the foregoing objects and shall transact its business at such time as the Council may meet for the transaction of its other business. Said Committee may create no expense chargeable to the Iowa State Medical Society. *Motion seconded and carried.*

President Bowen asked if this motion would do away with the Cancer Committee as it now stands. Dr. Jepson replied that the activities of the present Cancer Committee would be absorbed by the new committee.

REPORT OF THE BOARD OF TRUSTEES

House of Delegates, Iowa State Medical Society:

Your Board of Trustees in submitting their report of the finances of the Society for the year 1932, feel that certain explanations are due the delegates. The figures are in the auditor's report, but stressing and amplifying certain features will perhaps convey to the delegates certain facts that have impressed your Trustees in conducting the financial affairs of our Society.

The past year has been the first year that your Society has attempted to operate under a budget. Preparing a budget, without precedents to follow, naturally resulted in a budget that was not one hundred per cent perfection. Nevertheless the budget was able to show the Trustees after six months in 1932, that they must assume definite responsibilities for certain changes in the operating of our Society. This involved operating after July first without a managing director. Our by-laws state that the Board of Trustees shall appoint a managing director. Your Board of Trustees, feeling that we had a personnel that could carry on without sacrificing any of the Society's activities, took a broad interpretation of the word "shall," and have purposely delayed filling this office until our present meeting. There may come a time when we will need a managing director, and the substitution of the word "may" instead of "shall" in our by-laws, would leave with those in charge of the finances of the Society discretionary powers, which our Board of Trustees feels is advisable so that no one could interpret their actions as perhaps arbitrary. Certainly in not employing a managing director since July, 1932, there was no intention of being arbitrary, yet the conditions demanded that someone assume responsibility. This your trustees assumed, and now ask your approval of the same. Incidentally this action resulted in a saving of $2,611.25 in the budget allowance for general salaries.

During the year it became necessary to make the following appointments: Dr. James E. Reeder, of Sioux City, was appointed Councilor for the fourth district to succeed Councilor William Jepson, who resigned. Dr. C. W. Ellyson, of Waterloo, was appointed Councilor for the sixth district because of the death of Councilor W. L. Hearst. Dr. Channing G. Smith, of Granger, was appointed a member of the Committee on Constitution and By-laws, succeeding President-elect C. B. Taylor, who resigned from the committee. Mrs. Grace McDonald was appointed stenographer in the central office and began her work January 1, 1933. This additional help was necessary in view of the tremendous increase of work in the office during the legislative session, and the need for training someone to fill possible vacancies which might occur July 1.

Since the Board of Trustees consists of only three men, each member feels an individual responsibility for the decisions that are made. There is no evasion of responsibility. Each member of necessity knows that his actions are subject to the approval or disapproval of the one supreme body of our Society, the House of Delegates. The duties of the Board of Trustees are well defined, and while a committee of three are able to accomplish their duties expeditiously, there is a danger that some may feel that the advantages of having such a small group might lead to unwarranted assumption of power. The fact that the duties of the Trustees are well defined is a protection against such an assumption. Realizing that successful operation of any Society demands a certain interlocking of activities, your Board of Trustees has requested that at least two meetings a year be held jointly with the Council. One such meeting was held in February. We submitted our budget for 1933, and before completing the same asked the Council if the amount allotted to them was, in their opinion, sufficient. Figures in detail were submitted as to general and district expenses. Your Board expressed a desire to build the budget around what the Council felt was their need for the coming year. The Trustees feel that this meeting resulted in much closer cooperation between that body of the Society which shapes Society policies and the body which must of necessity keep a close watch on financial affairs.

In preparing a budget one must estimate probable income. Last year we conservatively estimated the membership with $12.00 dues at 1900, and anticipated an income from dues of $22,800.00. The splendid loyalty of our members resulted in an income from dues of $25,735.80, this being $2,935.80 beyond our estimate.

Some question was raised one year ago as to changing the fiscal year of the Society from May first to January first. Our experience has more than justified this change, and the principal reason for the change remains as expressed one year ago. It simplifies budgeting and accounting, since expenditures are made to cover the receipts received for the same period of time.

It is not assumption of power, but rather lack of coordinating activities and financial expenditures due to our promotional features, that lead to trouble. At the beginning of 1932 we were confronted with a bill of $1,799.07 for Speakers Bureau expense which should have been included with the 1931 expenditures. This oversight was largely due to lack of departmental cooperation existing at that time, a condition which has been eliminated. Furthermore this statement is made with no reflection upon the desire of the Speakers Bureau personnel to cooperate. Nevertheless, such an item naturally disrupts the budget of the Society, yet has to be assumed. We found that our actual expenditures in all departments exceeded our expectations except in

Stationery and Printing Account	$ .37
Salaries	2,611.25
Medical Economics Committee	97.27
County Society Services	230.09

Outside of our inexperience in anticipating departmental income and expenses, what are the reasons accountable for the expenses in other departments exceeding our expectations?

The present financial depression is the answer. Our JOURNAL has improved until it is one of the foremost journals published by any state medical association. Its present standards should be maintained at all costs. The JOURNAL'S only source of income is from advertising and reprints. Naturally income from such a source has been materially less, due to general financial conditions. Income from advertising and reprints was

$2,313.34 Advertising
185.52 Reprints

$2,498.86 less than

anticipated. By keeping expenses at a minimum the final net excess of expense of the JOURNAL over income and the budget allowance from dues was $1,345.18. The annual session suffered because of a like cause, its principal source of income being the commercial exhibits. While the estimated income was $1,200.00, the actual income was $880.00, and the net total expenses of the annual session over income and budget allowance from dues was $363.59.

The Speakers Bureau has developed into one of our major activities. During the entire period of its existence it has been practically self-sustaining, but during the past year, in spite of every effort, and due to the depressed financial conditions, there resulted a deficit of $1,251.05. he Medico-legal service, which is a direct obligation of our Society to its members, has met with unusual expenses that resulted in a deficit beyond allotted expenses of $195.66.

The Council found its expenses to be $462.11 more than we anticipated, which simply means that in our estimate we did not allot a sufficient amount to the Council.

Your Trustees, due to some extra meetings that were not anticipated, exceeded their allowance by $77.11.

The activities of other committees exceeded their allowances by $110.43. This was entirely due to carrying out duties delegated to them by your body.

Rent and office supplies expense exceeded the allotted amount by $361.33. This was due largely to the purchasing of a multigraph, which will result in future savings to the Society.

The amount allotted for legislative activities has been given to the legislative committee which makes its own report.

In the making of a budget it is necessary to allow for unexpected expenses, and if such do not occur, and the expenses do not exceed budget allowances, this allowance, termed a return to surplus account, can actually be added to the Society's surplus. In last year's budget this was placed at $1,884.00.

After presenting the various deficits that have been encountered during the past year, the question naturally arises as to how it has been possible to end the year with a net income of $2,747.12. In the first place, the budget does not include in its anticipated incomes, those monies received from the interest on bonds and savings accounts, which amounted to $1,308.97. Actually we ended the year with a net income of $707.15, exclusive of the interest from bonds and savings account.

During this year, however, we were confronted with $1,799.07, a 1931 Speakers Bureau bill. This was paid, but without it; that is, including only 1932 expenses, we had a paper net profit of $2,506.22. This, however, does not present the true picture. We are not keeping within our budget, but the budget was able to tell us this in the middle of 1932.

We realized that unless certain changes were made we would possibly face a deficit. The unexpected 1931 bill of $1,799.07 practically exhausted our estimated return to surplus account of $1,884.00. Our income from the annual session was less than anticipated; likewise that from the JOURNAL and the Speakers Bureau. There was only one bright spot in our financial setup, and that was that our members were staying with the ship. We felt, however, that this would not be sufficient, particularly since your body had specified that the dues for 1933 were to be $10.00. Prompt action was necessary and the responsibility for this your Trustees assumed, in not employing a managing director. By doing this we affected a saving of $2,611.25. This, together with $2,935.80 more from dues than anticipated, enabled us to change a $3,040.83 deficit into an actual net income of $707.15, (and this after paying an unexpected 1931 bill of $1,799.07). This $707.15, together with income from bonds and savings deposits, $1,038.97, gives you the net income for the year of $2,747.12, as shown in the auditor's report.

Our problem this year is to carry on without sacrificing our activities. We believe it can be done.

The JOURNAL, the Speakers Bureau, the Council and other activities must be kept up to past standards. It is necessary to increase some budget allowances, due to the fact that some of the sources of income cannot be expected to increase or maintain former levels until there is a general financial improvement.

Your dues of $10.00 with an estimated membership of 2,100 are allotted as follows:

	1932	1933
JOURNAL and Reprints	$ 2,700.00	$ 4,680.00
Annual Session	720.00	1,080.00
Speakers Bureau	.....	1,200.00
Administrative Misc.	576.00	576.00
Rent and Office Supplies	1,800.00	2,160.00
Stationery and Printing	1,500.00	1,200.00
General Salaries	8,100.00	3,600.00
Trustees	180.00	240.00
Council	780.00	1,200.00
Medico-Legal	1,500.00	1,500.00
Legislative	1,500.00	1,500.00
Medical Economics	300.00	300.00
Other Committees	300.00	300.00
County Society Services	960.00	720.00
Return to Surplus	1,884.00	744.00
	$22,800.00	$21,000.00

Our probable gross income for 1933 is estimated as follows:

	1932	1933
Journal Advertising	$ 7,800.00	$ 5,400.00
Journal Reprints	960.00	864.00
Annual Session	1,200.00	840.00
Speakers Bureau	3,480.00	3,000.00
Miscellaneoeus	48.00	48.00
Dues	22,800.00	21,000.00
Estimated	$36,288.00	$31,152.00
Actual	$35,696.71	

Exclusive of interest on bonds and savings.

We have secured a reduction in our printing contract amounting to $480.00 and an estimated reduction of reprint costs from $900.00 to $864.00. Last year we estimated the cost of the Journal at $11,460. The actual cost was $10,305.82. Our estimate for the total cost during 1933 is $10,944.00. Salaries remain unchanged. The probable reduced income is responsible for allotting a larger amount from our dues to the support of the Journal. For the same reason a larger allotment is made from our dues for the annual meeting. Likewise the Speakers Bureau will need some financial support at the present time.

We expect to effect some saving in our printing account since we now have a multigraph machine installed in the office.

While the auditor's report comments that our income for 1932 increased $3,366.45 (largely because of $12.00 dues) and our expenses decreased $3,534.84 (the major part through not employing a managing director) and that thereby the improvement shown in 1932 over 1931 was $6,901.29, we must guard against a spending spree.

Our budget for this year is figured very closely. In our return to surplus account, which may be needed for unforeseen expenses, we have reduced the same from $1,884.00 in 1932 to $744.00 in 1933.

We are going back to $10.00 dues, this means with 2,100 members, $4,200.00 less income.

Our gross income in 1932 (less interest received) was $35,696.71

$31,152.00 (estimated for 1933)

$ 4,544.71.

In other words we are attempting to operate with an expected less income of $4,544.71. Your Board of Trustees feels that our Society should operate on an income basis. We have in reserve funds for extraordinary activities that cannot be foreseen and yet may arise. We feel that we must not retrograde: we must advance, and that if our finances are conducted on a sound basis, we will be better able as a Society to grasp future opportunities as they present themselves.

Your Trustees in presenting an account of their stewardship trust that it will meet with your approval.

The office of the Secretary, the editing of the Journal, the direction of the Speakers Bureau, together with the tremendous amount of routine work in the office of the State Medical Society, require an efficient personnel, which we now have to carry on the work of the office. We urge every member of the Society to visit the central office whenever possible and to acquaint themselves with the manifold and varied aspects of the work of the Society which are coordinated there.

Oliver J. Fay, Chairman
Gordon F. Harkness
E. M. Myers

Dr. O. J. Fay *moved* that the report of the Board of Trustees, as published in the handbook, be accepted. *Motion seconded and carried.*

REPORT OF DELEGATES TO AMERICAN MEDICAL ASSOCIATION

Dr. Fred Moore presented the following report:

The delegates have no especially prepared report upon the meeting of the House of Delegates of the American Medical Association of last year, but I want to recall to your minds the instructions which you gave the delegates last year in regard to the candidacy of Dr. Bierring for the office of president-elect. We were instructed last year to do everything within honorable means to promote the candidacy of Dr. Bierring. You know the result. Dean Lewis was elected. I may say for your information that it is not an unusual situation for a man not to be chosen president-elect at the first presentation. Your delegates have been in touch with his friends over the nation during the last few months and have received very much encouragement in regard to presenting him again this year.

I *move* that the delegates to the American Medical Association be instructed to promote in every honorable way the candidacy of Dr. Walter L. Bierring for the office of president-elect of the American Medical Association. *Motion seconded and carried.*

REPORTS OF STANDING COMMITTEES

Committee on Arrangements

President Bowen stated that the Committee on Arrangements had no particular report to make, since its work consisted in arranging the program for the annual session; but that he hoped the members would be satisfied with the program as arranged. He praised the work of the local committee and urged all members to attend the smoker on Wednesday night, arranged by the local committee.

REPORT OF COMMITTEE ON CONSTITUTION AND BY-LAWS

House of Delegates, Iowa State Medical Society:

The Committee on Constitution and By-laws herewith submits its annual report, in accordance with the provisions of the By-laws.

At the 1932 session of the House of Delegates, the following amendments to the Constitution were

proposed, and are now presented for your final action:

BE IT RESOLVED, that a new article shall be added to the Constitution as follows:

ARTICLE VI
Council

The Council shall be the board of trustees of this Society, with full authority and power of the House of Delegates between annual sessions, unless the House of Delegates be called into special session. It shall consist of the Councilors, the President, President-elect, Secretary and Treasurer of the Society. Seven members shall constitute a quorum.

BE IT FURTHER RESOLVED, that the title of the Present Article VI shall be changed to Article VII.

BE IT FURTHER RESOLVED, that the title of the present Article VII be changed to Article VIII.

BE IT FURTHER RESOLVED, that the title of the present Article VIII shall be changed to Article IX, and that the words "and three Trustees" be stricken; that the word "and" be inserted preceding the word "eleven" and a period placed following the word "Councilors."

BE IT FURTHER RESOLVED, that the title of the present Article IX shall be changed to Article X; that the title of the present Article X shall be changed to Article XI; that the title of the present Article XI shall be changed to Article XII; and that the title of the present Article XII shall be changed to Article XIII.

Secretary Boice for the Council presented proposed changes in the Constitution at the 1932 session as follows:

ARTICLE VI
Council

"The Council shall be the Board of Trustees of this Association. The Council shall have full authority and power of the House of Delegates between annual sessions, unless the House of Delegates shall be called into session as provided in the Constitution and By-laws. It shall consist of the Councilors, the President, the President-elect, the Secretary and the Treasurer of the Association. Seven of its members shall constitute a quorum.

Article VI shall be Article VII; Article VII shall be Article VIII; Article VIII shall be Article IX; Article IX shall be Article X; Article X shall be Article XI; Article XI shall be Article XII; Article XII shall be Article XIII.

Article VIII, Section 1 of the Constitution, omit the final three words in the section and insert the word "and" following the word "treasurer."

Article VIII, Section 2 of the Constitution, omit the line, "the Trustees shall be elected for three years, one each year."

Article VIII, Section 3 of the Constitution, omit the words "and Trustee," in lines five and six.

Article VIII, Section 4 shall be omitted in its entirety.

Doctor Boice on his own initiative proposed Amendments to Article IV of the Constitution as follows:

ARTICLE IV
Composition of the Association

In lieu of the present Section 1, insert the following as the new Section 1:

"This Association shall consist of members who shall be the members of the component county medical societies who have been certified to the headquarters of this Association, and whose dues and assessments for the current year have been received by the Secretary."

Section 2 shall be omitted in its entirety.

Section 4 shall be omitted in its entirety.

Section 5 shall be omitted in its entirety.

The new Section 2 shall be the following:

"LIFE MEMBERS. Life members shall consist of such members in good standing as shall have paid their annual dues, and other obligations to the society for thirty consecutive years, and shall have been so recommended by their county society. Such members shall receive the JOURNAL, shall be exempted from the payment of dues; may not hold office nor be eligible to the advantages of medical defense."

The new Section 3 shall be the following:

"GUESTS. The Chairmen of the Sections on Surgery, Medicine and of the Head Specialties (eye, ear, nose and throat), shall each be authorized, with the concurrence of the Program Committee, to invite one guest speaker from outside the state. On special occasions the Council may invite additional guests."

The old Section 3 shall be made the new Section 4:

"ASSOCIATE MEMBERS. Teachers in any regular medical school, resident in Iowa, in no manner engaged in the practice of medicine, and not otherwise eligible to regular membership, may become associate members of this Society, when elected associate members of the component society of the county in which said teachers live. Such members shall be designated associate members; they shall enjoy the same privileges as regular members and shall be subject to the same conditions."

Proposed Amendments to the By-Laws by Doctor Boice of the Council, Should Proposed Article VI Carry

Chapter III, Section 2. In the last two lines, the words, "Board of Trustees" shall be changed to "the Council."

Chapter IV, Section 7. After the word "shall," insert the words "through the Council." (See Chapter XII, Sections 1 and 2.)

Chapter VI, Section 3. Wherever the words "Board of Trustees" occur, or the word "Trustees," substitute the words "the Council" therefor.

Chapter VI, Section 4. Wherever the words "Board of Trustees" occur, the words "the Council" shall be substituted therefor.

Chapter VI, Section 5, to be omitted in its entirety.

Chapter VII, Section 2, page 18, the word "Board of Trustees" to be changed to "the Council" in lines 14 and 15.

Chapter VII, Section 4, lines 10 and 11, omit "with the approval of the Board of Trustees."

Chapter VII, Section 5, shall be omitted and the following substituted therefor: "It shall be the duty of the Council to provide for and to superintend the publication of the Journal of the Iowa State Medical Society, and of all proceedings, transactions and memoirs of the Society. It shall have full discretionary power to omit from the Journal in part or in whole, any paper referred to it. To carry out in the foregoing, the Chairman of the Council shall each year appoint from the membership of the Council, three men who shall be the Committee on Publication. This committee with the Editor and the Secretary shall constitute the Publication Committee. The Council may, with the Secretary, appoint an executive secretary of the Society; and such assistants as may be necessary, and shall determine all salaries and the terms and conditions of their employment."

Chapter VII, Section 6. "All resolutions and recommendations of the House of Delegates pertaining to the expenditure of money must be approved by the Council before the same shall become effective. All such resolutions or recommendations shall specify a definite amount, or so much thereof as may be estimated as necessary for the purpose. Nothing in this section shall be construed as limiting the Committee on Public Policy and Legislation in its activities while carrying out the instructions of the House of Delegates. The Council shall have the accounts of the Treasurer, and of the Journal office audited annually or oftener, if deemed necessary, and shall make an annual report to the House of Delegates."

The Council shall conduct its meetings and activities in accordance with the rules and regulations governing the House of Delegates.

Each Councilor shall be elected by the delegates from the component county societies of the respective Council district, provided that two-thirds of the said delegates are present. If such number of the delegates be not present, election shall be by the House of Delegates from recommendations made by the Committee on Nominations.

The Council shall appoint from its membership three men who shall constitute the Finance Committee, which shall elect its chairman after each annual meeting. Beginning in 1933, one of these appointees shall be for one year, one for two years, and one for three years; thereafter appointments shall be for three years. The duty of this committee shall be to directly supervise the business and finances of the State Society, and it shall meet at least six times per year.

Should a vacancy occur, on account of death or otherwise, among the general officers, delegates to the American Medical Association, standing or special committees of the Society, the Council shall fill such vacancy until the next annual meeting of the House of Delegates, unless otherwise provided for in the Constitution and By-laws.

During the interval of the annual meetings, the Council shall have full power and authority of the House of Delegates. It shall hear the reports and supervise the action of the various committees when the same is necessary in order to carry forward the work of the Society and in accordance with the instructions of the House of Delegates.

Chapter VII, Section 8. The Council shall fix the salary of the Secretary and the Treasurer. The Council shall meet at least four times a year in addition to the annual meeting. The Chairman and Secretary may call a special meeting when deemed necessary. In addition to the Committees elsewhere specified, the Council may appoint from its membership an Executive Committee and such other committees as deemed necessary or advisable. All Committees (except finance), shall be appointed for one year and shall carry out the instructions of the Council. The Executive Committee shall consist of the Chairman and the Secretary and one other member of the Council.

Chapter VIII, Section 1. Omit the line "A Committee on Finance," also omit from this same chapter the whole of Section 10.

Chapter VIII, Section 4, in the second line, substitute for the "Board of Trustees," the words "the Council through its Committee on Publication."

Chapter VIII, Section 8, wherever the words "Board of Trustees" occur, the words "the Council" shall be substituted therefor.

Chapter IX, Section 1, the words "of seven dollars and fifty cents per capita" shall be made to read "as determined by the House of Delegates."

Chapter IX, Section 3, the words "Board of Trustees" shall be changed to "Council."

Chapter IX, Section 4, the word "Trustees" shall be changed to "Council."

Chapter XIV, Sections 4 and 6, wherever the words "Trustees" or "Board of Trustees" occur, substitute the word "Council."

Proposed Amendments to the By-Laws by This Committee

Chapter VI, Section 1. Add in third line after the word "Delegates," the words "and the Council."

Chapter VI, Section 4. Add in fourth line after the word "Delegates," the words "and the Council."

Chapter VI, Section 5. The word "shall" in line 10 to be changed to "may," and in lines 10 and 11, the words "managing director" to be changed to "executive secretary."

Chapter VI, Section 5. The third paragraph of this section be deleted.

Chapter VII, Section 1. Omit, beginning with line 8, the words "At this meeting it shall elect a chairman and secretary, and".

Chapter VII, Section 1. In line 10, change the word "chairman" to "secretary."

Chapter VII, Section 4. Add the following paragraph to this section: "Should a vacancy occur, on account of death or otherwise, among the general officers, delegates to the American Medical Association, standing or special committees of the Society, the Council may fill such vacancy until the next Annual Session of the House of Delegates, unless otherwise provided for in this Constitution and By-laws."

Chapter VIII, Section 1. Omit line 11, the words "A Committee on Finance (3)."

Chapter VIII, Section 1. The last paragraph shall be amended to read: "Such committees shall be nominated by the incoming President and approved by the House of Delegates, unless otherwise provided."

Chapter VIII, Section 8. Add in line 16 of this section after the word "pay," the following: "for the defense of any member retaining commercial malpractice insurance,".

Chapter VIII, Section 10. Omit entirely.

Chapter IX, Section 1. The first two lines shall be made to read "A per capita assessment as authorized by the House of Delegates on the membership of".

Chapter IX, Section 1. Insert at the end of the first sentence in line 4, the following words: "This assessment shall be pro-rated in case of new members admitted to the county societies during the year."

Proposed Amendments to the By-Laws, Should Article VI Fail to Carry

Chapter VI, Section 5. Insert following the first sentence of the second paragraph of this Section: "Nothing in this Section shall be construed as limiting the Committee on Public Policy and Legislation in its activities while carrying out the instructions of the House of Delegates or the Council."

Chapter VII, Section 1. Insert at the beginning of this section: "The Council shall consist of the Councilors, the President, the President-elect, the Secretary and the Treasurer of the Society. Eight of its members shall constitute a quorum."

Frederick J. Swift, Chairman
Channing G. Smith
John H. Peck

Dr. F. J. Swift, chairman of the committee, stated that in addition to the report of the committee as printed in the handbook, two proposed amendments had been submitted to him. The first was submitted by Dr. S. T. Gray, of Albia:

BE IT RESOLVED, That the offices of Councilors as now constituted, be hereby vacated, and

BE IT FURTHER RESOLVED, That the Councilors shall be selected by the delegates of each Councilor district in separate caucuses, and

BE IT FURTHER RESOLVED, That the Councilors for the first, sixth and eleventh districts shall be elected for a term of one year; the Councilors for the second and seventh districts shall be elected for a term of two years; the Councilors for the third and eighth districts shall be elected for a term of three years; the Councilors for the fourth and ninth districts shall be elected for a term of four years; the Councilors for the fifth and tenth districts shall be elected for a term of five years; and thereafter each Councilor shall be elected for a period of five years.

The second proposed amendment was submitted by Dr. C. A. Boice:

Chapter VII, Section 6 (new)—"The Council shall be the executive body of the House of Delegates and between sessions shall exercise the power conferred on the House of Delegates by the Constitution and By-laws."

Dr. Swift *moved* that the report of the committee be accepted. *Motion seconded and carried.*

President Bowen announced that Dr. Boice's proposal was an amendment to the by-laws and consequently must lay over for at least one day.

REPORT OF THE FINANCE COMMITTEE 1932-1933

The Finance Committee met in the central office of the state society on January 31, 1933. In accordance with the resolution adopted at the 1932 annual session, the Committee made a careful audit of the accounts of the Society for the period May 1, 1931, to January 1, 1932, a period not previously reviewed by the Committee. No errors or discrepancies were found.

The Committee further inspected the Society's accounts for the fiscal year 1932 and after a thorough check of the bills incurred, with their corresponding orders and checks, voted to accept the audit as made by the certified public accountant, Mr. Widdup. The serial numbers of ten missing orders were noted, but since the corresponding checks were on file, it was agreed by the members of the Committee that the accounting was accurate. The serial numbers and amounts of twenty-five checks which to date had not been cleared were listed and filed in order to facilitate the audit for the ensuing year.

The Committee commends the form of the audit prepared by Mr. Widdup, which lists all checks drawn upon Society funds and makes clear to the members of the Society the exact expenditure of their dues.

The Committee would also take this opportunity to comment upon the budget system inaugurated by the Board of Trustees in 1932 and the excellent check which it affords upon the expenditure of funds.

Ernest C. McClure, Chairman

Dr. McClure called the attention of the House to the fact that only those annual reports submitted for the fiscal year January 1 to January 1 bore any weight and *moved* that the report of the Finance Committee as printed in the handbook be accepted. *Motion seconded and carried.*

SUPPLEMENTARY REPORT OF THE COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

In order that the members of the Iowa State Medical Society may be fully informed in regard to changes in the operation of the Perkins, Haskell-Klaus Laws, and that they may realize the magnitude of the social and financial problems of medical care for the indigent sick and medical education, it seems advisable that the Committee on Medical Education and Hospitals should publish a brief report. As would naturally be expected, the increase in indigency incident to the prolonged period of depression through which we are passing, and the retrenchment that has been necessary in every governmental activity, have not lightened the burdens of those who are faced with the necessity of providing adequate medi-

cal and surgical care to the poor and of supplying an adequate amount of proper clinical material for teaching purposes. In the main, the data set forth in the original report of this committee remain accurate, and the summary and conclusions drawn from them need not be greatly modified. There are, however, certain changes, additions, and corrections which should be recorded in this report.

Medical Care of the Indigent Sick

County

The amount of money spent by the various counties in the state during the fiscal year ending December 31, 1931, through their Boards of Supervisors, for the care of the indigent sick is set forth in Table I, which also shows a comparison with the 1928 county expenditures for indigents. The total spent for the care of the indigent sick in 1928 was $446,970.78, while the amount spent in 1931 was $648,470.64.

TABLE I

County Expenditures for Indigents Including Medical Care	1928	1931
I. Total Expense	$2,433,801.09	$3,358,265.33
II. Nurses and Hospitals	191,427.60	266,125.92
III. Medical Aid Cost	226,296.52	352,501.83
IV. Per cent of Total Expense	9	10.4
V. Per cent which both II and III are of Total Expense	17	18.4
County Home Expense		
VI. Total Expense	$1,310,183.07	$1,208,730.92
VII. Medical Aid and Attendance	29,246.66	29,842.89
VIII. Percent Medical Aid is of Total County Home Expense	2	2.4
IX. Per cent of Total Poor Expense Paid to Doctors, Hospitals, etc.	12	14.1

It has been necessary for the counties to furnish medical and hospital care to an increased number of their indigent sick. An effort was made by the committee to learn the approximate expense of such care. The total amount spent by all the counties through their Boards of Supervisors in 1932 for medical and hospital care rendered to the indigent sick *within the counties* exceeded one million dollars. It was found that the total cost to Polk County for hospital care only for its patients in Broadlawns Hospital in 1932 was $215,710.33. The cost to the county per patient day at Broadlawns was $2.96, which represents all the departments including contagious, general and tubercular.

The cost to the county per patient day for one hundred consecutive hospitalized patients in Woodbury County was $3.54, which was for hospitalization only and did not include ambulance, nursing, or medical and surgical service. In Pottawattamie County the same service to one hundred consecutive patients averaged $3.27 per patient day.

The average per diem cost to the county for hospital, nursing, ambulance, and medical service to one hundred consecutive hospitalized indigents in Linn County was $5.00.

State

The appropriation of $1,000,000 a year available for carrying out the provisions of Chapter 199 of the Code has not yet been changed. Since the number of patients that can be cared for is restricted to the limit of the appropriation, it is still necessary to operate the University Hospitals at two-thirds of their capacity.

Perkins, Haskell-Klaus Laws

Changes in the Law

There have been no changes in the laws, and only minor changes in their operation. A sustained effort has been made to lower transportation costs by persuading patients to provide their own transportation or to have patients committed with the understanding that they or their friends provide transportation to and from the hospitals. In addition four ambulances have been purchased during the last year. The use of these ambulances has effected a saving of $4,000.00 per month. Table II shows that there has been considerable saving in transportation costs.

Another local modification in the operation of the laws has been the continuation by Wapello and Linn County Medical Societies of having their committed patients examined by the County Society, which receives all or a major part of the examination fee. The members of these societies believe that they have reduced to a minimum the commitment of patients who have no value for teaching purposes and who can be treated as efficiently and more economically at home.

TABLE II

Costs for Indigent Individuals Treated at University Hospitals	1928-29	1929-30	1930-31	1931-32
Total Patients treated	7,069	8,220	9,615	10,944
"Out" patients	1,407	1,263	2,064	2,225
"In" patients	5,662	6,957	7,551	8,719

Physicians' Fees for Patients Examined but not Admitted	1928-29	1929-30	1930-31	1931-32
Number	1,018	1,266	1,709	2,185
Cost	$5,090.00	$6,330.00	$8,545.00	$10,925.00

Transportation Costs for "Out" Patients	1928-29	1929-30	1930-31	1931-32
Number of individuals paid by state	519	600	915	1,053
Cost paid by state	$9,747.82	$11,192.77	$16,698.53	$16,761.72
Aver. cost to state	18.78	18.65	18.24	15.92
Number of individuals who paid own fare	888	663	1,149	1,172

Transportation Costs for "In" Patients	1928-29	1929-30	1930-31	1931-32
Number of individuals paid by state	3,958	4,402	4,420	5,325
Cost paid by state	$126,678.60	$137,433.14	$142,409.38	$148,626.72
Aver. cost to state	32.05	31.22	32.22	27.91
Number of individuals who paid own fare	1,704	2,555	3,131	3,394
Per cent paid by state	63%+	60%+	55%+	58%
Total individuals paying own transportation	2,592	3,218	4,280	4,566

	1928-29	1929-30	1930-31	1931-32
Total cost to state per individual patient on annual county reports*	$116.50	$105.42	$88.30	$76.17
Total cost per individual treated at hospitals*	$133.28	$121.66	$103.99	$91.37

* Many patients are examined who never get to the hospitals. All patients are included in county reports, which lowers the average cost per individual.

Proposed Changes in the Laws

The primary purpose of the Perkins, Haskell-Klaus Laws is to supply clinical material for the instruction of medical students. They also have a secondary humanitarian function of providing medical and hospital care for the sick and crippled indigents of the state. In its original report, this committee pointed out wherein the laws are failing to accomplish those purposes and the reasons for such failure. Numer-

ous suggestions for amendments, modifications and alterations in the Perkins, Haskell-Klaus Laws have been made. The Iowa State Medical Society, through its House of Delegates, has approved several such suggestions in the belief that their adoption would tend to correct certain evils and abuses, and would enable the laws more nearly to succeed in accomplishing the ends for which they were adopted. The more important of the approved suggestions for major changes may be outlined as follows:

1. The law should be amended so that the legal determination of indigency shall be as binding upon the county as it now is upon the state. When a properly committed state patient has recovered sufficiently, he may, as provided for in the laws, be sent to his home for treatment outside the hospital. Since his indigency has already been determined by the district court, it would appear obvious that he should automatically become a charge upon the County Board of Supervisors. Such is not now the case and for treatment at home he must usually depend upon the generosity of a physician. The practical effect of changing the laws to require closer coordination between the state and county agents for providing indigent service will be to eliminate a considerable number of state patients not truly indigent, who lack the decency and honesty that should prevent them from accepting aid from the state, but have enough pride to make them unwilling to "go on the county."

2. As a corrollary to making the legal determination of indigency equally binding upon the state and county, and in simple justice to the counties, the laws should be amended to provide that the investigation of indigency shall be made by the County Board of Supervisors, or someone directly under its jurisdiction, instead of, as at present, the county attorney. If the after-care of the patient is to become a responsibility of the county, and if, as seems likely, a part of the expense at the University hospitals is to be charged to the county, it is obvious that the investigation and report on the patient's ability to pay is a natural function of the supervisors, or their agent, the overseer of the poor. They are accustomed to resisting improper demands upon the public purse and are sure to make more careful and efficient investigations than are now conducted.

3. The third major change in the laws is that a part of the hospitalization costs should be charged to the county. Such a division would tend to equalize costs to the different counties. At present counties like Linn with a large population near to Iowa City receive much more service than they pay for, while less populous counties farther from the University receive much less service than the proportion of taxes they pay into the general fund would entitle them. The plan of dividing the cost between the county and the state will not increase the county expenses if by its adoption the University hospitals can be filled to capacity and the burden of providing medical and hospital care for some of the indigents on the waiting list be lifted from the counties.

University Hospitals

The only important change in the method of conducting the hospitals is that provision has been made, although not yet put into effect, that the Psychopathic Hospital can be under the same administration as the General Hospital and the Children's Hospital. It still is provided for by a special appropriation of $108,000 a year, and in addition, the fees received from private patients are being used for the support of the hospital.

Expenditures and Earnings

The expenditures of the University Hospitals and their earnings are set forth in Tables III and IV, respectively. If the items in these tables are compared with those in Tables VII, VIII, XIV, XV and XVI in the original report, it is evident that in many instances notable economies have been effected. The

TABLE III

UNIVERSITY HOSPITALS
EXPENDITURES
For Period Ending June 30, 1932.

	Actual Expenses
Administration	
Salaries	$ 52,523.08
Supplies	10,584.31
Equipment	2,022.93
Sub-total	65,130.32
Professional Care of Patients	
Group Nurses	1,500.00
School of Nursing Salaries	138,790.62
School of Nursing Supplies	380.82
Nurses Psychological Tests Salaries	357.10
Interne Salaries	8,597.01
Interne Supplies	78.65
Interne Equipment	335.34
Interne Wearing Apparel	1,707.47
X-ray Salaries	23,028.32
X-ray Supplies	22,223.47
X-ray Equipment	558.89
X-ray Repairs	269.52
Pathological Chemistry Salaries	6,872.20
Pathology Laboratory Salaries	5,799.96
Pathology Laboratory Supplies	1,479.45
Anaesthesia Salaries	9,095.39
Anaesthesia Supplies	9,338.69
Serological Laboratory Salaries	1,699.92
Physical Therapy Salaries	5,568.52
Social Service Salaries	15,008.67
Social Service Travel Expense	10.35
Sub-total	252,700.36
Departmental	
Nutrition Salaries	57,202.18
Nutrition Foods Only	207,478.19
Nutrition Equipment	747.45
Nutrition Supplies	12,133.50
Housekeeping Salaries	52,043.60
Housekeeping Supplies	29,257.68
Perkins School Salaries	1,742.36
Perkins School Supplies	24.05
Maintenance and Repair Salaries	5,726.67
Maintenance and Repair Supplies	8,948.95
Mechanical Staff Salaries	5,359.93
Brace Shop Salaries	9,837.14
Brace Shop Supplies	3,229.60
Stores and Supplies Salaries	3,377.29
Bandage Room Salaries	1,911.45
Barber Shop Salaries	2,880.16
Occupational Therapy Salaries	1,072.25
Occupational Therapy Supplies	85.86
Drugs and Biologicals	40,409.11
Blood Transfusions	19,416.00
Surgical and Nursing Supplies	53,983.91
Ascheim Zondek Test Supplies	87.90
Sub-total	516,955.23
Contingent Expenses	
Ambulance and Truck	2,165.85
Laundry	49,325.16
Postage	2,510.89
Freight and Express	1,763.05
Gas	3,439.08
Telephone and Telegraph	14,367.82
Heat, Electricity and Water	49,556.60
Travel Expense Hospital Empl.	370.55
Insurance and Bond Premium	1,880.30
Sub-total	125,379.30
Miscellaneous	
Corrective Apparatus	17,657.86
Patient's Wearing Apparel	2,782.33
Photos	486.68
Empl. and Staff Wearing Apparel	2,139.85
Equipment and Replacement	6,918.24

Water Softener Supplies	
Sub-total	29,984.96
Transportation Indigent Patients and Doctor Examination Fees	205,693.15
Refunds to Patients	16,200.29
New Auto Equipment	1,506.59
Auto Repairs	50.35
Auto Supplies (Gas and Oil)	415.52
Drivers' Salaries	199.74
Auto Insurance	123.85
	$1,214,339.66

TABLE IV

UNIVERSITY HOSPITALS

Earnings Report

	1928-1929 Days	1928-1929 Bd. & Rm.	1931-1932 Days	1931-1932 Bd. & Rm.
Private Patients at $9.00	73	$ 657.00	202	$ 1,818.00
Private Patients at $6.00	5,825	34,950.00	4,343	26,058.00
Private Patients at $4.50	6,727	30,271.50	6,608	29,736.00
Cost Patients at $3.50 and $4.00	10,816	39,840.00	9,132	36,528.00
Cost Patients at $4.25	331	1,406.75	662	2,813.50
Part Pay Patients at $4.00 week	3,051	1,739.07	1,328	756.96
Isolation Patients at $3.50	55	192.50	....	.....
Indigent Persons	181,926	636,741.00	172,765	597,292.90
Indigent Pending Persons	6,041	21,143.50	13,636	47,128.90
Staff Patients at $4.50	1,996	8,982.00	1,815	7,119.60
Staff Patients at $3.50	45	176.00	.....	.....
Staff Isolation Pts. at $3.50	68	615.50	.....	.....
Staff OB Patients at $4.00 wk.	97	77.52	.....	.....
Infants at $1.00 and $1.50	663	695.00	8,796	13,194.00
Non-committed Cases	....	.....	76	265.80
Jeans Research—Staff	717	358.50	.....	.....
Jeans Research—Pay	1,321	660.50	2,862	1,431.00
Total	219,752	$778,506.34	222,225	$ 764,142.66
Meals		11,381.30		19,475.80
X-ray		70,139.31		90,381.75
Operating Room Fee		23,729.50		30,525.00
Classes		8,349.60		9,818.40
Radium		4,437.29		5,352.28
B. M. R.		1,003.50		722.50
Cultures		2,850.00		3,982.00
Tissue		3,110.00		6,230.00
Diarsenal		3,218.00		1,129.00
Ambulance		3,219.05		1,990.55
Telephone and Telegram		5,119.75		9,012.58
Drugs		735.65		3,062.90
Hydrotherapy		3,090.00		4,222.00
Barber		1,950.00		2,686.75
Crutches and Canes		331.36		.....
Braces		20,918.60		23,064.14
Casts		6,823.60		8,346.25
Hospital Store		1,470.72		3,314.34
Miscellaneous		2,688.04		1,308.44
Bus checks		145.60		.....
Blood		3,910.00		19,525.00
Appliances		5,019.10		5,723.42
E. K. G.		186.75		320.00
Out Clinic Registration fee		138.00		977.00
Sensitization		.....		620.50
Nurses' Entrance Fee		.....		5,107.00
Nurses' Books		.....		100.00
Beauty Shop Rental.		.....		241.46
Resectoscope (Service Fee)		.....		2,120.00
Group Nursing		.....		885.17
West Lawn Room Rent		.....		294.38
Zondek-Aschheim Test		.....		1.50
Total		$962,470.96		$1,024,682.77

savings in transportation costs by the use of ambulances has already been mentioned. Many salaries have been reduced and food and supplies cost less than they did two years ago. The average number of days spent by patients in the hospital has been reduced and a greater number of patients have been cared for at a smaller cost per patient as shown in Table II. The basic per diem rate for "medicine, care and maintenance" has been reduced from $3.68 to $3.21. Unfortunately, however, receipts from other sources than the state, such as private and cost patients, and gifts, have been materially reduced as shown in Table V. The effect of this diminution in outside income has been to neutralize the savings resulting from economies to such a degree that it has been impossible greatly to increase the number of patient days, as shown in Table VI.

MEDICAL COLLEGE

Teaching Material

The original report of this committee stated "that the University Hospitals were planned and designed by experts to serve the teaching needs of a medical school of about 500 students. If the total capacity of the hospitals, 786 indigent beds, is needed for teaching 600 students, it must be assumed that under the present plan of operating the hospital with 500 to 550 indigents beds occupied, adequate clinical instruction cannot be given to so many students." Since the hospitals have continued to be operated at only two-thirds capacity, the committee is still of the opinion that the supply of clinical material is insufficient for a medical school of 500 students. An effort has been made by the physicians of the state to select more suitable material, and this effort has been especially successful in Linn and Wapello Counties. There has been a marked increase in the number of patients in the obstetrical service so that it is now possible for each senior student personally to conduct several deliveries. This very satisfactory increase in deliveries is shown in Table VII.

TABLE V

Year	Receipts other than State	Doctors' Examining Fees	Travel Expense
1928-29	$199,589.55	$20,735.00	$136,426.42
1929-30	233,152.86	28,655.00	148,625.91
1930-31	230,181.00	34,531.00	159,107.91
1931-32	188,702.36	41,698.00	165,388.44

TABLE VI

Patient Days

Year	Total	*Private	Cost	†Staff	State
1928-29	219,752	12,961	16,618	2,206	187,967
1929-30	234,408	15,247	17,032	2,181	199,948
1930-31	220,724	12,713	17,869	1,857	188,285
1931-32	222,225	12,052	13,119	1,627	195,419

*Includes some "faculty" patients who are charged cost rates.
†Includes only internes and nurses.

Sooner or later the problem of meeting the teaching needs of the medical college will have to be met, probably in one of three ways:

1. By reducing the size of the medical school. This would not only produce fewer graduates than are required to meet the needs of medical practice in the state, but would continue the present uneconomical plan of operating the hospitals at two-thirds capacity, and extend the same extravagant system to the operation of the medical college.

2. By filling the hospital, using methods commonly employed in large privately owned institutions, with private and semi-private patients at small fees and using the patients for teaching purposes. As pointed out in the original report, such a course has been followed by at least one state university with apparently disastrous results. It would be particularly repugnant to the physicians practicing throughout

this state and would doubtless soon destroy the value of the hospitals and medical college as educational institutions.

3. By filling all the 786 indigent beds. This plan, while undoubtedly the best as far as medical education is concerned, would either require an additional legislative appropriation of at least $200,000.00 a year, or an equivalent sum from some other source.

The Waiting List

The most casual survey indicates that the laws are not entirely fulfilling their humanitarian function of providing medical and surgical treatment for indigent purposes. The original report of this committee showed that the number of patients waiting for treatment at the University Hospitals was 1,934 on November 1, 1930. In the two years since the publication of that report, it has steadily increased, until on December 7, 1932, it reached the appalling total of 4,752. The number on the waiting list at midnight, February 7, 1933, was 5,238, according to a wire from the superintendent of the hospital. The distribution by counties of the patients now waiting for admission to the University Hospitals is shown in Table VIII. The reasons for the waiting list set forth in the original report still apply. Of them, the most serious and important is the plan still in force of operating the hospitals at only two-thirds capacity.

TABLE VII

Deliveries at University Hospital, From 1926 to Present Date

	1926	1927	1928	1929	1930	1931	1932	1933
Jan.	24	19	25	28	35	45	51	76
Feb.	25	20	22	14	38	37	62	77
Mar.	24	20	31	25	29	45	44	
Apr.	30	28	20	25	30	47	57	
May	20	23	30	19	34	38	51	
June	21	20	16	34	29	51	64	
July	25	23	20	28	35	37	71	
Aug.	14	21	18	20	32	45	61	
Sept.	12	18	20	19	22	49	62	
Oct.	16	17	21	24	26	56	70	
Nov.	17	13	20	22	22	45	60	
Dec.	20	24	11	27	24	35	60	
	248	246	254	285	356	530	713	

TABLE VIII

Waiting List December 7, 1932

Adair 30	Floyd 51	Monona 21
Adams 19	Franklin 36	Monroe 44
Allamakee ... 21	Fremont 18	Montgomery .. 26
Appanoose ... 73	Greene 53	Muscatine 64
Audubon 19	Grundy 41	O'Brien 21
Benton 44	Guthrie 26	Osceola 4
Black Hawk...162	Hamilton 55	Page 50
Boone 55	Hancock 25	Palo Alto..... 19
Bremer 28	Hardin 51	Plymouth 11
Buchanan 19	Harrison 18	Pocahontas ... 41
Buena Vista... 17	Henry 11	Polk 205
Butler 42	Howard 12	Pottawattamie 27
Calhoun 55	Humboldt 44	Poweshiek 32
Carroll 28	Ida 16	Ringgold 44
Cass 13	Iowa 54	Sac 20
Cedar 30	Jackson 59	Scott 161
Cerro Gordo... 84	Jasper 61	Shelby 6
Cherokee 16	Jefferson 88	Sioux 18
Chickasaw.... 26	Johnson 126	Story 50
Clarke 22	Jones 33	Tama 89
Clay 29	Keokuk 41	Taylor 48
Clayton 34	Kossuth 53	Union 44
Clinton 156	Lee 38	Van Buren.... 34
Crawford 9	Linn 438	Wapello 25
Dallas 23	Louisa 27	Warren 32
Davis 38	Lucas 42	Washington .. 41
Decatur 42	Lyon 10	Wayne 34
Delaware 80	Madison 29	Webster 110
Des Moines... 23	Mahaska 56	Winnebago ... 27
Dickinson 43	Marion 35	Winneshiek .. 26
Dubuque 134	Marshall 76	Woodbury 62
Emmet 19	Mills 8	Worth 19
Fayette 62	Mitchell 40	Wright 29

The Limitation of Beds

We have already discussed the effect of restricting the number of patients cared for to the limit of the appropriation, in reducing to an inadequate level the amount of clinical material for teaching purposes. Its responsibility for the ever increasing waiting list must be obvious. Since the average length of time spent in the hospital is not more than sixteen days, the 266 beds, which represent the difference between the 520 beds now being used and the 786 available for indigents, would accommodate more than 500 additional patients each month. Even if the hospital is filled to its capacity, as it should be in the interest of medical education, and to meet the needs of the indigent sick, it will be a long time before all the patients now on the waiting list can be received.

The committee on medical education and hospitals reported two years ago that the plan of operating the University hospitals at two-thirds capacity was uneconomical and extravagant, and it is still of that opinion. The committee had estimates made them of the probable cost of operating the hospital with all of its beds filled. Because of the reduced cost of materials, and other economies mentioned in this report, it is probable that the hospitals could now be operated at capacity with an additional expenditure of $200,000. However, the average per diem cost of all patients could be materially reduced. Expressed differently, the number of patient days per year could be 300,000 for a cost of $1,200,000 instead of 200,000 patient days, as at present, of $1,000,000. Expressed still differently, the number of indigent patients could be increased fifty per cent at an increased gross cost of twenty per cent.

Summary

Members of the medical profession, as well as all citizens of the state, should be prepared to do their part in promoting such changes in laws, or their operation, as will most fully serve the interests of the medical school, the hospital, the medical profession, and the indigent sick. In the long run those interests are identical.

1. The medical school requires enough properly distributed clinical material for the instruction of five hundred students. Theoretically, it makes no difference if the teaching material is composed of, and the hospitals filled with, state, cost, pay or private patients, but they *should be filled.*

2. The hospitals are required to furnish patients for teaching, but are also charged with the duty of caring for the indigent sick. Therefore, it is to their interest, not only that they should be filled, but that they should be filled *with indigents.*

3. The medical profession wants the students to receive adequate instruction and the truly indigents to be cared for. It does not, or it should not, want to assume the burden of caring for poor patients when beds which they might occupy have to be filled with cost and pay patients in order to provide sufficient teaching material.

4. The indigent sick are numerous enough, and their need is great enough, to fill the 786 beds allotted to them.

Arthur W. Erskine, Chairman

Dr. Erskine *moved* that the report of the Committee on Medical Education and Hospitals be accepted as printed in the handbook. *Motion seconded and carried.*

REPORT OF THE MEDICO-LEGAL COMMITTEE 1932-1933

During the past year your Medico-Legal Committee has encountered few situations of sufficient interest to report. The increasing number of members carrying commercial malpractice insurance has made our work much lighter. Your committee has deemed it advisable to dispense with a detailed report from our defense attorney because it entails an expense of $50.00. With this in mind, and because the legal wheels grind so slowly, it would seem that a biannual report would be satisfactory and expedient.

There has been considerable controversy among our members concerning the cost and value of the medico-legal defense afforded by the Society. For the sake of those who seek information, the following is offered. An excerpt from section eight, of the by-laws of the Society reads as follows:

"It shall be the duty of the members of this committee, severally or collectively, to investigate all claims of malpractice against members, to adjust such claims in accordance with equity where possible, and, if in their judgment an adjustment is impossible, or the claim is unjust, or the damage sought is excessive, to lend such help, aid and counsel as they may deem proper; but they shall not pay, or obligate the Society to pay, a judgment against any member; nor shall they pay or obligate the Society to pay for legal counsel not authorized by the Board of Trustees." The preceding quotation is called to your attention and the following phrase should be emphasized, "they shall not pay or obligate the Society to pay a judgment against any member." In other words, the Society obligates itself to defend but not indemnify its members in case of suits for malpractice.

Some years ago, your Board of Trustees became aware of the fact that Society members who carried commercial malpractice insurance were being defended at the Society's expense when, in point of fact, the commercial policies which they had purchased, obligated the insurors to defray said expense. It therefore seemed to be foolish and expensive for our organization to defend those members who were paying insurance premiums for such services. Upon realization of what had been going on, the Board of Trustees decided that members protected by commercial insurance should be defended by their insurors. This decision amounted to a fiat, but the purport of said fiat was never incorporated in our by-laws. As the matter now stands, a commercially insured member, who is threatened with a suit for malpractice, and is not satisfied with the legal counsel afforded by his commercial insurors, may demand the services of an attorney authorized by, and paid by, the Society, thus piling up additional and unnecesary expense. While it is the intention of our Society to render every reasonable assistance in the event of suits against members, it does not seem expedient to pay out money for services which already have been paid for through policy premiums. For the purpose of a clear definition of the Society's obligations to its members with regard to malpractice defense, it would seem advisable that the by-laws be changed in such a manner as to state clearly whether or not commercially insured members shall be defended by us upon their request. The chief reason for bringing up this matter, is that an officer of the Society has recently raised the point in connection with a malpractice suit brought against him.

Your Committee wishes to bring to your attention a few facts concerning our medico-legal defense which may do away with some misunderstanding. As near as can be ascertained, seventy-seven per cent of our members carry commercial malpractice insurance. This means that twenty-three per cent of our enrollment is being protected at the expense of the major group. Upon first consideration this seems unfair but averaging the medico-legal costs for the years 1929, 1930, 1931, and 1932, we find that the average yearly expense thus estimated, divided by the total number of present members, shows that each member pays approximately sixty cents a year for Society defense. This is certainly not a burdensome individual expense when consideration is given to the fact that a member might forget to pay his commercial malpractice insurance premium, in which event he would be in a bad way if our Society was not behind him. Another feature which must not be overlooked is that there is always a possibility of our Society being sued as an organization. This being true, it is important that funds should be available for defense. It seems advisable, at this time, to state that in the defense of a malpractice suit, an appeal to the Supreme Court is very expensive. Cases submitted to this court necessitate the printing of evidence in a certain prescribed form which frequently makes necessary the expenditure of two or three hundred dollars. It is, therefore, advisable that defendants consider very carefully the necessity of appeals to the higher courts. Your Committee feels that under existing conditions, it is its duty to advise every member to carry commercial malpractice insurance in order that he may be indemnified as well as defended in case of suit.

Frank A. Ely, Chairman

Dr. Ely made the following supplementary report:

I only want to call your attention very briefly to the fact that in the report as printed in the handbook we recommend a change in the by-laws concerning the Society's defense of those members who retain commercial malpractice insurance. This has been suggested by the Committee because the Committee is not in favor of the amendment which is presented. It so happens that in the past many times the Society was paying for the defense of members who held commercial insurance and the insurance companies were obliged to defend them. As a result, many times our expenses for defense for the year ran

very high; this last year the amount was about $1,800.00.

My reason for bringing up this amendment to the effect that the Society will not defend any member who retains commercial insurance is for the purpose of establishing a precedent. The Board of Trustees has told the Chairman of the Committee that we did not defend members who held commercial insurance because the insurance companies are obliged to defend. One of our members has raised the question that inasmuch as each member contributes approximately sixty cents out of his dues for his malpractice defense from the society, if a member chooses to insist upon the Society's defending him aside from his commercial insurance, he has that right. I agree that we have no right to deny any member the defense of the Society in case he wants it, although it seems foolish, when he is insured by a good company to pay an attorney to defend him. The proposed amendment is for the purpose of having the House of Delegates determine whether the Society is to defend members who carry malpractice insurance. It is a question as to which is supreme, the by-laws of the Society or the Board of Trustees. When this amendment is brought up for action, it is not the choice of the Medico-Legal Committee to insist that this amendment is a child of their own brain, but to determine how we shall answer a member who carries malpractice insurance and still wants the Society to defend him. Dr. Ely *moved* that the report be accepted. *Motion seconded and carried.*

REPORT OF COMMITTEE ON NECROLOGY

House of Delegates, Iowa State Medical Society:

We record at this time the passing of sixty-four of our profession during the months from April 1 to December 31, 1932. At the meeting of the House of Delegates in 1932, we reported the death of eighteen physicians, making the total eighty-two for the year.

Alden, Frederick	Des Moines	55	Nov. 18,	1932	Heart
Barewald, Charles Leopold	Davenport	61	April 14,	1932	Heart
Barnes, Theodore	Blockton	69	.....		Burns
Beck, James W.	Gruver	74	April 30,	1932	Arteriosclerosis
Bickley, John Cecil	Waterloo	48	Aug. 9,	1932	Drowned
Bufkin, Calvin W.	Runnels	60	July 11,	1932	Accident while hunting
Burd, Edwin	Lisbon	86	Dec.	1932	
Chesire, Matthew U.	Marshalltown	62	Sept. 23,	1932	Heart
Clabaugh, Sylvester Louis	Essex	75	Sept. 30,	1932	Cerebral hemorrhage
Coleman, Raymond Clare	Estherville	43	Jan. 7,	1932	Suicide
Crawford, John R.	McClelland	75	Oct. 21,	1932	Cerebral hemorrhage
DeFord, William H.	Des Moines	73	Mar. 22,	1932	
Dewey, William H.	Moville	72	May 18,	1932	Following long illness
Donohoe, George	Cherokee	56	May 13,	1932	Following operation
Doty, Clarence Hays	Center Point	51	Mar. 14,	1932	
Driver, Fred Joseph	Macedonia	63	June 6,	1932	Automobile accident
Eiker, Bert L.	Leon	61	May 6,	1932	Pneumonia
Elrod, Charles F.	Chariton	83	May 15,	1932	Cerebral hemorrhage
Ericcson, Charles Melvin	Gowrie	60	July 30,	1932	Long illness
Evans, Robert	Fort Dodge	75	Sept. 16,	1932	Heart
Grant, Andrew Fowler	Tanta, Egypt	63	July 4,	1932	Heart (Member I. S. M. S.)
Habenicht, Heinrich A.	Des Moines	56	July 9,	1932	Heart attack
Hanson, Pauline Townsend	Marshalltown	66	April 5,	1932	Carcinoma
Harned, Calvin Waldo	Des Moines	53	Nov. 18,	1932	Heart
Hearst, William L.	Cedar Falls	64	Oct. 28,	1932	Coronary disease
Heustis, James Walter	Dubuque	69	April 9,	1932	Coronary thrombosis
Hoff, Amos Wyatt	Des Moines	77	June 3,	1932	
Hooper, Samuel Elmer	Carlisle	65	Aug. 31,	1932	Heart
Jones, Edgar Hazelwood	Eldora	73	Aug. 7,	1932	Heart
Kenefick, Michael J.	Algona	71	Aug. 6,	1932	Cerebral hemorrhage
Keough, John Victor	Dubuque	58	Dec. 2,	1932	Heart
Lanpher, Howard Arthur	Des Moines	49	Nov. 7,	1932	Pneumonia
Lesan, Cassius T.	Mount Ayr	58	July 9,	1932	Heart lesion
Letourneau, Philip H.	Waukon	71	July 13,	1932	Long illness
Loomis, Milo Mason	Manilla	58	July 17,	1932	Automobile accident
Magee, Charles Henry	Burlington	72	Aug. 7,	1932	Pernicious anemia
McCune, James Harold	Kirkville	86	Nov. 30,	1932	Age
McKinley, Alexander D.	Des Moines	60	July 11,	1932	Accident while hunting
Meis, Edward William	Sioux City	55	Dec. 7,	1932	Long illness
Mershon, George Alonzo	Marshalltown	80	Dec. 20,	1932	Long illness
Miller, Henry Edward	Alton	81	Nov. 6,	1932	Arteriosclerosis
Moon, Arnold Carpenter	Orleans	72	Dec. 13,	1932	
Morgan, William G.	Woodward	65	May 17,	1932	
Narrley, George R.	Keokuk	54	May 8,	1932	After long illness
Nelson, Audley Emmet	Sidney	64	June 13,	1932	Automobile accident
Nelson, Carl David	Persia	53	Nov. 14,	1932	Skull fracture and apoplexy
Park, William Martin	Indianola	78	Sept. 1,	1932	Angina pectoris
Philips, David Wendell	Victor	74			
Preston, James F.	Grinnell	83	Nov. 7,	1932	
Rhonalt, Anthon Anderson	Waterloo	46	Oct. 29,	1932	Following long illness
Richardson, Everett Eugene	Ames	63	Aug. 20,	1932	Diabetes
Rodgers, Edwin C.	Wapello	60	May 30,	1932	Suicide
Sharpe, Walter Stokes	Valley Junction	55	Oct. 3,	1932	Heart

Sloan, Milton Granville	Mitchellville	84	Dec. 28, 1932	Age
Smith, Harry T.	Humeston	62	Aug. 23, 1932	Postoperative
Smith, Norris A.	Lineville	53	May 13, 1932	Automobile-train accident
Sproule, Egbert Wilson	Humboldt	55	Oct. 3, 1932	Heart
St. John, Rufus L.	Cincinnati	93	Aug. 1, 1932	
Strunk, Herman Joseph	Burlington	75	May 17, 1932	
Tharp, William Smith	Sioux City	75	July 3, 1932	Heart disease
Walker, Hugh Thomas	Riceville	82	Mar. 10, 1932	
Ward, Everett Chapman	Brandon	56	Nov. 18, 1932	Heart disease
Wilson, Carroll A.	Marble Rock	55	June 3, 1932	Following operation
Yocom, Albert Lee, Sr.	Chariton	76	Mar. 1932	Postoperative

Twenty of the sixty-four were between forty and sixty years of age; thirty-five were between sixty and eighty and nine were over eighty years of age.

Seven died after a long illness; one of carcinoma; heart lesions, coronary diseases and arteriosclerosis accounted for the death of twenty-four; two died of pneumonia; four deaths were postoperative; extreme age was the cause of two deaths; eight deaths resulted from accidents; and two from pernicious anemia and diabetes.

At the beginning of the year, we lost our newly elected and greatly admired president. Two past presidents and one member of the Council have passed on.

May we stand, honoring our dead, as their names are read?

Respectfully submitted,
L. R. Woodward, Chairman
C. A. Boice, Secretary

Dr. Woodward requested that Dr. Boice, the Secretary of the Council, present the report. The members of the House of Delegates rose while Dr. Boice read the report of the committee. Dr. Boice *moved* that the report be accepted. *Motion seconded and carried.*

REPORT OF THE COMMITTEE ON PUBLICATIONS

To the House of Delegates, Iowa State Medical Society:

A detailed report of this committee does not seem necessary, since the monthly publication of the Journal of the Iowa State Medical Society is in itself a resumé of the activities of the Committee on Publications. A financial statement of the Journal's accounts, including expenditures and receipts, will be found in the auditor's report.

In spite of a somewhat reduced income, we have attempted to maintain the high standards which have characterized this publication in years past. Twenty original papers by out-of-state physicians have been published, together with seventy-four papers by Iowa authors. As in the past, precedent has been given to papers delivered before the annual session of the state society, but it will be readily appreciated that we have been favored by an unusual number of worthwhile contributions, other than those presented before the annual meetings. The character and number of articles submitted would seem to indicate a widespread confidence in our JOURNAL, a fact which is most pleasing to the Committee.

In an attempt to bring informative discussions regarding current and pertinent medical news to the Iowa profession, over one hundred editorial articles have appeared in the twelve issues of the JOURNAL. Personal mention was made of 157 members during the year, and 88 book reviews were published under the heading "The Journal Book Shelf."

The Committee is particularly pleased to report the apparent interest manifested in that section of the JOURNAL devoted to society proceedings. During the year, 225 county society meetings were recorded. This record, which has been made possible because of the generous cooperation of the various secretaries of the county medical societies, is sufficiently unique to have caused favorable comment from the national organization. We would particularly solicit a continuation of this excellent cooperation from the component county societies, since we believe that the exchange of news between county organizations through this channel is of much benefit to organized medicine throughout the state.

In view of the fact that the JOURNAL advertisers, to a very large extent, make possible the publication of the JOURNAL, without financial burdens being thrown upon the membership of the society, the Committee would again urge our readers to patronize JOURNAL advertisers, and to make definite mention of the JOURNAL in corresponding with those manufacturers who favor our publication. The sale of advertising space must, in the final analysis, depend upon the extent to which the members of the society support our advertisers.

The Editor and the members of the Committee on Publications wish at this time to express their appreciation to each member, who through his cooperation and assistance, has made possible the maintenance of the JOURNAL as a fitting house organ of the Iowa State Medical Society.

R. R. Simmons, M.D., Editor and
Chairman of the Committee on Publication

The Secretary, as a member of the Committee on Publications, *moved* that the report be accepted. *Motion seconded and carried.*

REPORT OF THE COMMITTEE ON PUBLIC POLICY AND LEGISLATION

To the House of Delegates, Iowa State Medical Society:

Pursuant to the instructions of the House of Delegates in session in Sioux City, in May, 1932, the Committee on Public Policy and Legislation, during the period following the annual meeting, held several conferences with the university authorities for the purpose of coming to an agreement as to proposed

changes in the Perkins, Haskell-Klaus Laws. While these negotiations were under way, and before bills could be prepared and introduced into the Legislature, the following Joint Resolution No. 7 was passed by the Forty-fifth General Assembly:

HOUSE JOINT RESOLUTION NO. 7
By Wenig and Durant.

Providing for the appointment of a committee to hold consultations and conferences with members of the faculty of the medical college and members of the staff of the hospital of the State University of Iowa.

Whereas, the 36th General Assembly passed an act (Laws 1915, Ch. 24), known as the Perkins Law, providing "for the treatment of indigent children suffering from malady or deformity," and

Whereas, the 38th General Assembly passed an act (Laws 1919, Ch. 78), known as the Haskell-Klaus Law, providing "hospital service and treatment for indigent adult persons," being "An Act to provide free hospital service and medical and surgical treatment for persons who are afflicted," etc., and

Whereas, the 40th General Assembly passed an Act (Laws 1923, Ch. 63) "to make an appropriation for the completion of the hospital and the plant of the college of medicine of the State University of Iowa and for the equipping of same," and

Whereas, there was "appropriated out of any money in the state treasury, not otherwise appropriated, to the State University of Iowa, the sum of four hundred fifty thousand dollars ($450,000.00) annually for a period of five years, beginning July 1, 1923, for the completion of the hospital and the plant of the college of medicine, and for equipping the same," and

Whereas, "The appropriation provided in this act is contingent upon the granting to the said State University of Iowa of the amount of one million one hundred twenty-five thousand dollars ($1,125,000.00) by the general education board, and an equal sum by the Rockefeller foundation for the purposes herein specified," and

Whereas, the Perkins law had already, in 1915, made possihle a beneficent service for "indigent children suffering from malady or deformity," not unlike the laws of several states, and the humanitarian provision of the Shriners in behalf of crippled children, and

Whereas, the Perkins law lost its identity when it was merged with the Haskell-Klaus law, which antedated, by four years, the generous donation and appropriation of five million dollars ($5,000,000.00) from the general education board, the Rockefeller foundation and the State of Iowa, and

Whereas, earnest effort has been made during the past five years to carry out the philanthropic intent of the donors and of the members of the 40th General Assemhly, and

Whereas, it has been demonstrated beyond doubt in the State of Iowa that increased taxes help to make indigents, and increasing indigency increases taxes, and a vicious circle has been established, and

Whereas, the report of admissions and the waiting list of state patients shows a growing waiting list, as follows:

Sept.	1, 1927	16
Sept.	1, 1928	337
"	1, 1929	875
"	1, 1930	1,669
Nov.	1, 1930	1,934
Feb.	7, 1933	5,238

and admissions from July 1, 1929 to June 30, 1930 were 8,580, and

Whereas, the state appropriation bill has asked for only one million dollars ($1,000,000.00) for each year of the next biennium for the purpose of carrying out the provisions of Chapter 199, Code of 1931, and

Whereas, it has in the past required the expenditure of a like sum for the care of the admitted patients, approximately 8,500 per annum, and

Whereas, an emergency exists, wherein more than 5000 residents of the State of Iowa, men, women and children, are clamoring for admission to the State University Hospital, and

Whereas, the 45th General Assembly has cognizance of this distressing situation, and feels keenly the humiliation that is Iowa's with publication of the facts to the world, therefore:

Be It Resolved by the General Assembly of the State of Iowa:

Section 1. That a committee of nine be appointed, three by the president of the senate, three by the speaker of the house of representatives and three by the governor; said committee to be composed of members and non-members of the General Assembly.

Sec. 2. That said committee, either as a whole, or as one or more individual members, when requested by the committee so to do, shall, as early as possible, hold a consultation with the faculty, or with individual members of the faculty of the State University of Iowa Medical College and with the staff or with members of the staff of the State University Hospital; they shall also confer with the State Board of Education or members thereof and with the president of the State University and with any or all agencies having knowledge of conditions and being in a position to offer suggestions as to remedies.

Sec. 3. That the sole purpose of this committee shall be to seek the cause or causes of at least one of Iowa's present misfortunes, viz., unprovided for sick and suffering, and report back to the 45th General Assembly, at the earliest possible moment, the results of their consultations and conferences, with such recommendations as to the committee seem fit and proper, for the deliberate consideration of the Governor, the Senate and the House of Representatives, and for such further action by them as circumstances warrant.

Sec. 4. The members of the committee shall serve without compensation from the state, but the members of the committee shall be paid their necessary travelling and hotel expenses.

Sec. 5. This act being deemed of immediate importance shall be in full force and effect after its passage and publication in the Des Moines Register, a newspaper published at Des Moines, Iowa, and in the Spencer Reporter, a newspaper published at Spencer, Iowa.

As a result of this resolution, Governor Herring appointed O. J. Fay, M.D., of Des Moines; Arthur W. Erskine, M.D., of Cedar Rapids; and W. A. Sternberg, M.D., of Mount Pleasant, Iowa, to this committee; Lieut. Governor Kraschel chose Senator G. W. Patterson of Burt, Iowa; Senator E. R. Hicklin of Wapello, Iowa, and Senator Morris Moore of Walnut, Iowa, while Speaker of the House, George Miller, selected Representative Paul L. Millhone of Clarinda; Representative John Speidel of Washington, and E. E. Munger, M.D., of Spencer, Iowa. These men made up the Committee of Nine.

Because of the appointment of the above committee, the Committee on Public Policy and Legislation of the Iowa State Medical Society felt that no further effort should be made to introduce bills to change the Perkins, Haskell-Klaus Laws until after the above committee had made its recommendations. On or about April 3, 1933, the committee made the following report. A copy of the bills which they included to put their recommendations into effect is given immediately after the report.

The committee appointed pursuant to the provisions of House Joint Resolution No. 7, adopted hy the Forty-fifth General Assembly, beg leave to report that immediately upon its appointment it held an organization meeting as a result of which Dr. E. E. Munger was chosen as chairman of the committee and Dr. A. W. Erskine as secretary.

Thereafter the committee held consultations with individual members of the faculty of the State University of Iowa Medical College and with members of the staff of the State University Hospital. They also conferred with representatives of the State Board of Education and with the President of the State University. They also consulted with the legislative committee of the Iowa State Medical Society and with the Health Commissioner of the State of Iowa, and communicated with the officers of the schools of medicine in Wisconsin, Nebraska, Illinois, Kansas, Colorado, Missouri, Minnesota, Michigan and Indiana. They also communicated with the Secretary of the Association of American Medical Colleges and with the Council on Medical Education and Hospitals of the American Medical Association. They further consulted with numerous individuals of the medical profession, as well as some judges, county attorneys and other officers of the state of Iowa; and the chairman of the committee consulted with the officials of the Brookings Institution in Washington, D. C., and with William D. Cutter, Secretary of the Council on Medical Education and Hospitals of the American Medical Association and with officials of the Rockefeller Foundation in New York City.

The object of the formation of this committee is stated in said House Joint Resolution No. 7 to be as follows:

"The sole purpose of this committee shall he to seek the cause or causes of at least one of Iowa's present misfortunes, viz., unprovided for sick and suffering, and report back to the Forty-fifth General Assembly at the earliest possible moment the result of their consultations and conferences with such recommendations as to the committee seem fit and proper for the deliberate consideration of the Governor, the Senate and the House of Representatives, and for such further action by them as circumstances warrant."

This committee considered to be within the scope of the stated object for its formation (and as particularly set out in the preamble to said resolution) the subject of the existence of a waiting list of indigent patients committed to the State University Hospital under the terms of Chapter 199 of the Code of Iowa, 1931, and has given this subject especial consideration. This waiting list as of March 1, 1933, as disclosed by the records of said State University Hospital, comprised 5,434 persons. Whether this figure is accurate, your committee is unable to determine because there may have been a number of persons committed who since the time of their commitment have died or have been treated and cared for in other ways and at other places, but your committee is convinced that there is a large and needless number of persons upon this waiting list.

It has, therefore, seemed appropriate to your committee that it give consideration to the causes which have brought about this intolerable condition and to suggest certain remedies therefor.

Your committee believes that the law as stated in Chapter 199 of the Code of Iowa, 1931, was enacted for two purposes: First, to furnish adequate clinical material for the purpose of instruction of the number of medical students in the University of Iowa Medical Colleges who would reasonably meet the needs of the State of Iowa in the replacement and provision of trained members of the medical profession and, second, to provide care for indigent citizens of the state. Your committee finds that there are now 420 students enrolled in the Medical College, and for the last five years there have been graduated from this college approximately 95 students each year. Your committee further finds that in the year 1932, being the last year for which there are available data, there were 2,671 medical doctors practicing in Iowa, and in this connection your committee presents a tabulation which it attaches hereto as Exhibit I, showing the number of graduates from the Medical College in each of the years 1928 to 1932, inclusive, and the number of such graduates in practice in the State of Iowa in 1933, and the number of medical doctors practicing in the state in each of said years.

The Association of American Medical Colleges in 1925 appointed a commission on medical education which reported in 1933. This commission among other things found: "Available data indicate that proper medical service can be provided on the basis of one active physician to 1000-1200 persons, depending upon the size and type of the community, the organization of the services and other factors. The present number of physicians probably exceeds the need by at least 25,000 (in the United States) although the number of thoroughly qualified practitioners is and always will remain insufficient." There is now one medical doctor engaged in active practice in the State of Iowa to each 928 people. The average number of doctors dying and removing from the state during the past five years, as shown in Exhibit I, has been 71. Considering, therefore, the number of doctors now engaged in the practice of medicine, which is in excess of the number needed to render proper medical service to the people of the state, and considering the number of replacements normally needed as shown by the experience of the past five years, your committee believes that a student body in the aggregate in the medical school of a number which would make available substantially 75 graduates each year, would fully and amply meet the needs of the State of Iowa insofar as its medical needs are concerned.

If the number of students in the medical college is limited so as to provide only such additions to the medical profession as are needed, the quantity of clinical material for the teaching of the lesser number of students would be correspondingly reduced. The Association of American Medical Colleges through its secretary states: "We do insist, and the Council of Medical Education of the American Medical Association is in complete agreement with the demand, that the school should own or control a general hospital to the extent that it will appoint those members of the staff on whom devolves the teaching function. The requirement calls for a daily average of not less than 200 patients who can be utilized for teaching and of such a variety and character as to permit students to see and study the common types of surgical and medical cases, as well as a fair number in each of the so-called specialties. In the use of this clinical material, bedside and ward clinics should be developed for sections of from 5 to 10 students; and patients in medicine, surgery and the specialties should be assigned to each student under a well supervised clinical clerk system."

That a class of students within reasonable limits can receive more thorough instruction than one without such limits is the opinion of the deans of each of the schools of medicine hereinbefore referred to without exception, and as typical of such opinion, we desire to call to your attention the statement of the Dean of the Medical School of the University of Wisconsin as follows: "We have assumed that this section, by implication, prevents our taking more students in a class for clinical work in a hospital than can be accommodated there with due regard to the welfare of the patients. The medical school and hospital authorities believe that fifty students in a class are as many as can be accepted with due regard to the welfare of the patients, and have accordingly limited the work of the clinical years to that number of students." It is, therefore, the conclusion of your committee, and it so recommends, that the State Board of Education should adopt standards of admittance on a competitive basis to the medical school which would keep the student body of the College of Medicine within such limits as would produce for the last two years thereof an average of approximately 75 members for each of said years and also raise the standard of the type of student which is admitted to and graduated from the College; subject to the same limitations under the existing regulations whereby Iowa citizens are preferred.

During the year ended June 30, 1932, there were 8,719 patients admitted to the State Hospital. The average period of hospitalization for these patients during the same time was 17.7 days. The average number of patients, therefore, at the State Hospital constantly was 492.6. It therefore follows that some other means should be employed in order to care for the indigent sick of the state than the law as contained in Chapter 199, Code of Iowa, 1931, as presently administered.

Under the statutes of this state the duty of caring for indigents primarily rests upon the board of supervisors of each of the counties who are furnished with necessary funds through the levying of general taxes for the poor. Your committee believes, therefore, that Chapter 199, Code of Iowa, 1931, should be amended so as to provide that upon the filing of a complaint, as in that Chapter specified, the same should be referred to the board of supervisors of the county who should, through its overseer of the poor or other designated agent, make an investigation of the indigency of the subject of the complaint. That such subject should be examined by a physician appointed by the court who should receive not in excess of $2.00 for the examination, that if such physician receives a salary or other compensation from the public for his full-time services, no such examination fee shall be paid him, and that upon the report by the physician and the investigating agent of the board of supervisors, a hearing should be had at which the county attorney, the overseer of the poor or other agent of the board of supervisors, the patient or any persons representing him, should be authorized to introduce evidence and be heard. That if upon such hearing the court finds that such person is indigent and is in need of medical care, he shall ascertain from the physician in charge of admissions at the State Hospital, by a long-distance telephone call, reversing the toll to the State Hospital, whether the person can be received as a patient, and if he can, then the court shall enter an order of commitment, and if the physician appointed by the court to examine the subject certifies that an attendant to accompany the patient to the said hospital is necessary, then the court may enter an order appointing such attendant who shall receive not exceeding $2.00 per day for his time and his actual necessary traveling expenses by the most direct route whether by train or automobile.

If, however, the said subject cannot be received in the said hospital, then the court shall enter an order directing the board of supervisors of the county to provide adequate treatment at home or in a hospital.

Since the primary duty of caring for the indigent under the laws of Iowa rests upon the Board of Supervisors of each county, and since provision of funds for such purpose is made through the levying of general taxation, your committee recommends that said law be further amended so as to provide that the auditor of state shall ascertain the average cost per patient day during each year for all medicine, care and maintenance, and separately for the actual cost of special appliances, instruments and x-ray service used in connection with such treatment, and separately the cost of doctor's examining fees, and separately the cost of the transportation to and from the State Hospital, including the expense of attendants and escorts, of the treatment of all persons committed under the terms of said State Hospital. That the cost as so ascertained of caring for each committed patient other than the cost of transportation and attendants shall be paid one-half by the state and one-half by the county of each patient's legal residence. The cost of transportation and attendants shall be borne by the state. That the superintendent of said State Hospital shall certify to the auditor of state on the first days of January, April, July and October the amount not previously certified by him due the state from the several counties having patients chargeable thereto, and the auditor of state shall thereupon charge the same to the counties so owing. A duplicate certificate shall also be mailed to the auditor of each county having patients chargeable thereto. That the county auditor upon receipt of such certificate shall thereupon enter the same to the credit of the state in his ledger of state accounts, and shall at once issue a notice to the county treasurer directing him to transfer the amount from the poor fund to the general state revenue, which notice shall be filed by the treasurer as his authority for making such transfer, and shall include the amount so transferred in his next remittance of state taxes to the treasurer of state, designating the fund to which it belongs.

That said law be further amended so as to provide that all purchases of materials and supplies by said State Hospital shall be upon competitive bidding and that all expenses incurred by said State Hospital shall be audited by the auditor of state and paid by warrant drawn by him upon the state treasurer. That said law be further amended so as to authorize the said State Hospital to receive patients, care for and treat patients whether over or under 16 years of age who shall be financially able to pay the cost per patient day estimate as hereinbefore provided, but that no such patients shall be received until there is deposited with the hospital authorities a sum equalling such cost for the period of hospitalization estimated by the physician in charge of admissions; but that no such patient shall be received so long as there are indigents needing such care and treatment up to the amount of clinical material as hereinbefore recommended.

That the law be further amended to provide that the cost of any indigent patient to the county shall be certified by the state auditor to the county auditor and preserved by the county auditor and that whenever the same becomes collectable, such sum shall be a debt due the county from the patient or the persons legally responsible for his care, maintenance and support, and it shall be the duty of the board of supervisors and the county attorney to enforce the collection thereof.

Your committee feels that there is no need for a waiting list, with a possible exception of cases of deformity, for admission to the State Hospital. Indeed, it is difficult for your committee to see how patients under the other classifications of said Chapter 199 can be maintained without harm for any considerable period of time upon a waiting list. The suggestions and recommendations heretofore made would provide: First, for adequate clinical material for the needed student body in the state medical college. Second, for the care to that extent of indigent patients partly at state expense and partly at county expense. Third, for the care of all other indigents immediately through other avenues and by resort to the taxes laid under the general laws of the state for such purposes. Your committee further feels that the adoption of the recommendations would tend toward the saving of the taxpayers' money through the lessening of the need of transportation of indigent patients from long distances for an unnecessary purpose.

Your committee further recommends that the Board of Education be directed to continue the economies now in effect at the University Hospital, and also, since the state is now facing a grave emergency, and the standard of living of many of its citizens is far below what they desire and have been accustomed

to, and the state, like its citizens, must curtail its expenditures and live within its income in times of financial stress; that the Board of Education be directed to reduce the standards of hospital service to the lowest possible level consistent with the comfort and welfare of the patients.

It is the thought and suggestion of Senator Hicklin and Doctor E. E. Munger that the entire cost of indigent patients at the University Hospital should be borne by the respective counties from which they come inasmuch as those counties are primarily responsible for the care of their own indigent patients.

It is also their opinion and suggestion that no part of this act comes within the proper function of the court, that the board of supervisors should have the sole responsibility of commitment, based upon the advice of local doctors or health officers; that patients should be committed to the University Hospital so long as they can be received there, but that the local boards of supervisors should at all times have discretion to otherwise care for said patients if they feel that they can do so more economically.

Year	No. Ia. Grads.	No. Ia. Res. Admis.	No. Ia. Res. Grads.	In pract. in Ia. 1933	No. M. D.'s Pract. in Ia.	No. of Deaths	No. Recip. Lics. Cert.	No. Grtd. Lics. by Exams.	No. Grtd. Lics. by Recip.	Renewal fees Iowa and Elsewhere
1928	99	89	89	43	2420	66	6	114	23	$3076.00
1929	86	79	80	25	2666	73	7	92	30	3025.00
1930	97	89	93	15	2742	25	4	105	27	3046.00
1931	92	82	89	not listed	2815	82	7	112	38	3198.00
1932	97	71	91	in dir.	2671	78	6	116	48	3212.00

Des Moines, Iowa.
March 31, 1933.

To His Excellency, The Governor of the State of Iowa and Members of the Forty-fifth General Assembly.

Because of considerable data having a direct bearing on the operation of Iowa's adult indigent law, which data it is not possible to assemble and properly present before the time for adjournment of this session, your committee respectfully requests that it be not discharged, in order that it may present a supplementary or final report under authority of House Joint Resolution No. 7, to the special session to be held in August, 1933, or to the next General Assembly.

A BILL FOR

An Act to amend sections four thousand twenty-six (4026), four thousand twenty-seven (4027), repeal section four thousand ten (4010), four thousand twelve (4012), four thousand sixteen (4016), four thousand seventeen (4017), four thousand twenty-one (4021), and four thousand twenty-eight (4028), Code of Iowa 1931, and enact substitutes therefor, all relating to the treatment of indigent persons.

Be It Enacted by the General Assembly of the State of Iowa:

Section 1. That section four thousand ten (4010) be repealed and the following substituted therefor: "When such complaint is filed, the clerk shall furnish the county attorney and board of supervisors with a copy thereof, and said board shall, by the overseer of the poor or such other agent as it may select, make a thorough investigation of facts as to the legal residence of the patient, and the ability of the patient or others chargeable with his support to pay the expense of such treatment and care, and shall file a report of such investigation in the office of the clerk, at or before the time of hearing."

Sec. 2. That section four thousand twelve (4012), Code 1931, be repealed and the following substituted therefor: "The county attorney and the overseer of the poor, or other agent of the board of supervisors of the county where the hearing is held, shall appear thereat. The complainant, the county attorney, the overseer of the poor or other agent of the board of supervisors, and the patient, or any person representing him, may introduce evidence and be heard. If the court finds that said patient is a legal resident of Iowa and is pregnant or is suffering from a malady or deformity which can probably be improved or cured or advantageously treated by medical or surgical treatment or hospital care, and that neither the patient nor any person legally chargeable with his support is able to pay the expenses thereof, then the court shall ascertain from the physician in charge of admissions at the State Hospital of the College of Medicine of the State University, by long distance telephone call reversing the toll to the State Hospital, whether such person can be received as a patient and if he or she can, then the court shall enter an order directing that said patient be sent to the hospital of the College of Medicine of the State University for proper medical and surgical treatment and hospital care. If the court ascertains that such person cannot be received as a patient at said hospital then he shall enter an order directing the board of supervisors of the county to provide adequate treatment for said patient at home or in a hospital, and naming the physician or physicians who shall attend said patient."

Sec. 3. That section four thousand sixteen (4016), Code 1931, be repealed and the following substituted therefor: "If the physician appointed to examine the patient shall certify that an attendant to accompany the patient to said hospital is necessary, then the court or judge may appoint such attendant who shall receive not exceeding two dollars ($2.00) per day for the time thus necessarily employed and actual necessary traveling expenses by the most direct route to said hospital whether by train or automobile; but if such appointee is a relative of the patient or a member of his immediate family, or receives a salary or other compensation from the public for his services, no such per diem shall be paid him. The physician appointed by the court to make the examination and report shall receive therefor two dollars ($2.00) for each examination and report so made and his actual necessary expenses incurred in making such examination, but if such physician receives a salary or other compensation from the public for his full time services then no such examination fee shall be paid him. The actual, necessary expenses of transporting and caring for the patient shall be paid as hereinafter provided.

Sec. 4. That section four thousand seventeen (4017), Code 1931 be repealed and the following substituted therefor: "An itemized, verified statement of all charges provided for in the preceding section and in section four thousand twelve (4012) when approved by the judge under whose order the same were incurred, shall be filed with the superintendent of the hospital of the State University, and be charged on the regular bill for the maintenance, transportation and treatment of the patient, and be audited and paid in the manner as hereinafter provided."

Sec. 5. That section four thousand twenty-one (4021), Code of Iowa 1931, be repealed and the following substituted therefor: "The hospital authorities may at their discretion receive into the hospital for medical or surgical treatment or hospital care, patients not committed thereto under the provisions of this chapter; but the treatment or care of such patients shall not in any way interfere with the proper medical or surgical treatment or hospital care of committed patients. All of the provisions of this chapter except as to commitment of patients shall apply to such patients. The hospital authorities shall before receiving such patients collect from the person or persons liable for the support of such patients a sum equalling the cost of such care and treatment determined as in this chapter provided for the period of hospitalization as estimated by the physician in charge of admissions, and shall remit such sum to the state treasurer for credit to the state hospital fund."

Sec. 6. Amend section four thousand twenty-six (4026), Code of Iowa, 1931, by striking the period in line ten (10) and inserting in lieu thereof a comma and adding thereto the following: "and he shall also render separate bills showing the actual cost of the commitment, transportation to or from the said hospital, including the expense of attendants and escorts. That all purchases of materials, appliances, instruments, and supplies by said state hospital shall be upon open competitive bidding, and all contracts therefor shall be subject to the provisions of chapter sixty-two (62), Code of Iowa, 1931."

Sec. 7. Amend section four thousand twenty-seven (4027), Code of Iowa, 1931, by striking from line four (4) thereof the words "of education" and inserting in lieu thereof the words "of audit," and by inserting after the word "paid" in line 12 thereof the following: "as hereinafter provided so", and by adding at the end of said section the following: "The net cost as so estimated of caring for each committed patient other than the cost of commitment, transportation and attendants as herein provided shall be paid one-half by the state and one-half by the county of each patient's legal residence. The cost of the commitment, transportation and attendants shall be paid by the state."

Sec. 8. That section four thousand twenty-eight (4028), Code of Iowa, 1931, be repealed and the following substituted therefor: "Warrants issued under the provisions of this chapter for the payment of transportation, expenses or accounts herein provided for shall be promptly drawn by the state auditor on the treasurer of the state and forwarded by the auditor to the person or persons entitled thereto.

"The superintendent of the said state hospital shall certify to the auditor of state on the first days of January, April, July and October, the amount as herein provided not previously certified by him due the state from the several counties having patients chargeable thereto, and the auditor of state shall thereupon charge the same to the county so owing. A duplicate certificate shall also be mailed to the auditor of each county having patients chargeable thereto.

"The county auditor, upon receipt of such certificate, shall thereupon enter the same to the credit of the state in his ledger of state accounts, and at once issue a notice to his county treasurer, authorizing him to transfer the amount from the poor or county fund to the general state revenue, which notice shall be filed by the treasurer as his authority for making such transfer, and he shall include the amount so transferred in his next remittance of state taxes to the treasurer of state, designating the fund to which it belongs.

"The state auditor shall certify the total cost of commitment, transportation and caring for each indigent patient under the terms of this statute to the county auditor of such patient's legal residence and such certificate shall be preserved by the county auditor and shall be a debt due from the patients or the persons legally responsible for his or her care, maintenance or support, and whenever in the judgment of the board of supervisors the same or any part thereof shall be collectable, the said board may in its own name collect the same and is hereby authorized to institute suits for such purpose, and after deducting the county's share of such cost shall cause the balance to be paid into the state treasury."

A BILL FOR

An Act to amend section three hundred ninety-seven (397), Code of Iowa, 1931, relating to the duties of State Board of Audit.

Be It Enacted by the General Assembly of the State of Iowa:

Section 1. That section three hundred ninety-seven (397), Code of Iowa, 1931, be amended by inserting after the comma in line six (6) thereof the following: "except the hospital of the College of Medicine of the State University."

A BILL FOR

An Act to amend section thirty-nine hundred twenty-one (3921), Code of Iowa, 1931, relating to the powers and duties of the Board of Education.**

Be It Enacted by the General Assembly of the State of Iowa:

Section 1. That section thirty-nine hundred twenty-one (3921), Code of Iowa, 1931, be amended by adding at the end thereof the following: "provided that said Board of Education shall have no power with respect to the operation, control or government of the hospital of the College of Medicine of the State University, or the expenditure of funds appropriated therefor contrary to or inconsistent with the provisions of the other statutes of this state."

**A brief explanation of the above bill appears herewith:

Section 3921 of the Code defines the powers and duties of the State Board of Education, and invests the management and control of the property, real and personal, and the direction of the expenditure of all appropriations solely in said State Board of Education.

The proposed bills, insofar as the expenditure of funds and the audit of accounts and the determination of the patient day cost are concerned, invests these powers in the State Board of Audit, the State Auditor, and the State Treasurer.

To conform the powers of the State Board of Education in these respects only to the proposed bills, another bill was drafted which merely limits the power of the State Board of Education where that power is contrary to or not consistent with the provisions of other statutes. It does not take from the State Board of Education the jurisdiction to manage and administer the hospital.

The following letter from the chairman of the committee, E. E. Munger, M.D., explains the present status of the proposed changes in the Perkins, Haskell-Klaus Laws.

Thos. A. Burcham, M.D.,
Chairman of the Legislative Committee,
Iowa State Medical Society,
Des Moines, Iowa.

My dear Doctor Burcham:

The Committee created under Joint Resolution Number 7 made a preliminary report to the 45th General Assembly. The bills for an act to make the Committee's report into law could not be reached at this session, therefore the preliminary report was accepted and the Committee continued. It is the hope of the University authorities and the Committee that satisfactory bills can be agreed upon and presented at the special session of the legislature to be held in August, 1933.

Very truly yours,

E. E. Munger,
Chairman of the Committee.

April 19, 1933.

During the Forty-fourth General Assembly and after its adjournment, many legislators gave as their reason for defeating both the medical and osteopathic bills the fact that the question of medical education and licensure was so very technical that they did not feel competent to pass on the merits of the proposed changes in the medical practice act. They suggested that representatives of the M.D.'s and osteopathic physicians get together for the purpose of discussing the proposed changes with the idea of a possible agreement. Before arranging for such a conference the Committee on Public Policy and Legislation wanted the opinion of officers and members of the Iowa State Medical Society and a meeting was held in Des Moines on October 14, 1932, with the following members present:

W. W. Bowen, Fort Dodge, President; Charles B. Taylor, Ottumwa, President-elect; Lee R. Woodward, Mason City, Chairman of the Council; W. L. Bierring, Des Moines, Member of the National Board of Medical Examiners; H. S. Houghton, Iowa City, Dean of the Medical School of Iowa University; D. C. Steelsmith, Des Moines, State Health Commissioner; Gerald Blake, Assistant Attorney General, and Thos. A. Burcham, Robert L. Parker of Des Moines, and Peter A. Bendixen of Davenport, chairman and members of the Committee on Public Policy and Legislation.

The question of medical education and licensure was fully discussed and it was the unanimous opinion of this group that a compromise bill be offered to the osteopathic physicians of Iowa. An extract from the proposed bill is given below—it was intended to accomplish the purpose agreed upon by the above named group:

"Sec. 13. That the law as it appears in section twenty-five hundred thirty-nine (2539), code of Iowa, 1931, be and the same is hereby amended by striking from lines one (1) and two (2) of paragraph four (4) of said section the words: 'osteopaths, osteopaths and surgeons, chiropractors' and by substituting in lieu thereof the words: 'drugless healers'.

"Sec. 14. Every holder of a license to practice medicine and surgery, and every licentiate holding a license to practice osteopathy and surgery at the time of the passage of this act, and every applicant who shall in the future pass the examination to practice medicine and surgery shall be issued a license to practice medicine and surgery in all its branches.

"Every licentiate holding a license to practice osteopathy and practicing in Iowa on January 1, 1933, shall be issued, upon application (provided such application is made prior to January 1, 1934) a license to practice medicine but shall not be authorized to practice major surgery.

"Major surgery shall mean entering the major cavities of the body, brain, or the amputation of a limb or member of the body, and operations for mastoids, hernias, spinal cord, removal of the eyeball or radical operation on sinuses or antrum.

"Any person who was a student of an accredited college teaching osteopathy (located in the state of Iowa) on or before January 1, 1933, shall be permitted to take the usual examination for osteopathy prior and up to June 10, 1936, and each such applicant successfully passing such an examination shall be granted a license to practice medicine and minor surgery.

"Every applicant successfully passing an examination to practice as a drugless healer shall be issued a license to treat human ailments without the use of drugs or medicines, and without operative surgery to applicants passing examinations therefor, the applicant under such license to be specifically restricted by the terms thereof to the practice of the system or method which he specifically designated in his application as the one which he would undertake to practice and such license shall not authorize the licensee to practice obstetrics.

"Sec. 15. That the law as it appears in chapter one hundred eighteen (118), code of Iowa, 1931, be and the same is hereby repealed and that chapter one hundred nineteen (119), code of Iowa, 1931, be and the same is hereby repealed and that there be substituted in lieu of chapters one hundred eighteen

(118) and on hundred nineteen (119) the following:

"(1) Drugless healing defined. For the purpose of this title the following classes of persons shall be deemed to be engaged in the practice of drugless healing:

1. Persons publicly professing to be drugless healers or publicly professing to assume the duties incident to the practice of drugless healing.

2. Persons who treat human ailments without the use of drugs or medicines and without operative surgery.

3. Persons who act as representatives of any person in doing any of the things mentioned in this section.

(2) Persons not engaged in the practice of drugless healing. The preceding section shall not be construed to include the following classes of persons:

1. Licensed physicians and surgeons who are exclusively engaged in the practice of their respective professions.

2. Physicians and surgeons of the United States Army, Navy, or public health service, when acting in the line of duty in this state.

"Sec. 16. Every applicant for a license to practice drugless healing shall:

1. Present satisfactory evidence that he possesses a preliminary education equal to the requirements for graduation, from an accredited high school or other secondary school.

2. Present a diploma issued by a college engaged in teaching some branch of drugless healing, approved by the drugless healing examiners.

3. Pass an examination prescribed by the drugless healing examiners in the subjects of anatomy, physiology, symptomatology and diagnosis, hygiene and sanitation, chemistry, bacteriology, histology and pathology.

"Sec. 17. No college teaching any of the drugless healing arts shall be approved by the drugless healing examiners as a college of recognized standing unless said college:

1. Requires for graduation or for a receipt of a degree a complete course of study covering a period of not less than four (4) school years of nine (9) months each year in actual attendance.

2. Gives an adequate course of study in the subjects enumerated in paragraph three (3) of the preceding section, and including practical clinical instruction.

3. Publishes in a regularly issued catalog the requirements for graduation and the degrees as herein specified.

"Sec. 18. A license to practice drugless healing shall not authorize the licensee to practice operative surgery nor administer or prescribe any drug or medicine included in materia medica, or to practice obstetrics.

"Sec. 19. Every licensee shall place upon all signs used by him and display prominently in his office the words 'drugless healer.'

"Sec. 20. Any person licensed under the provisions of this act to practice as a drugless healer without the use of drugs or medicines and without operative surgery shall be permitted to take the examination for a license as a physician and surgeon when the applicant may show the board of medical examiners:

a. That he is a holder of a valid license as a drugless healer to treat human ailments without the use of drugs or medicines, or without operative surgery, duly issued by the state of Iowa.

b. That he has been engaged in the active practice of his profession for a period of not less than five (5) years prior to the date of his application.

c. That he is a graduate of a professional school, college or institution which taught the treatment of human ailments by the system or method which he had followed in the practice of drugless healing for the period aforesaid and which was reputable and in good standing at the date of his graduation.

d. That he has had a two (2) years' course of instruction in a college of liberal arts or its equivalent.

e. And a course of internship of not less than twelve (12) months in a hospital, reputable and in good standing in the judgment of the medical examiners, and he shall than meet the requirements and pass an examination prescribed by the board of medical examiners, and in the event he successfully passes such examination he shall be entitled to practice medicine and surgery."

This bill was sent to representatives of the Iowa Society of Osteopathic Physicians and Surgeons and they refused to accept the proposition, returning a bill which they fostered and which was later introduced in the Forty-fifth General Assembly as House File 255. (A copy of this bill was sent to every member of the Iowa State Medical Society.)

As a matter of information it is interesting to know that there are 557 osteopaths licensed in Iowa and 24 osteopathic physicians and surgeons holding Iowa licenses.

House File 255 was introduced on February 9, by Mr. Crouch of Greene County, in the House of Representatives. This bill, if enacted, would have given to the osteopaths all the rights and duties now possessed by the practitioners of medicine and surgery. It in effect would have permitted them in their practice to use anything that was taught by their schools, and would have so broadened the scope of osteopathy that there would have been little, if any difference between our profession and that of the osteopaths, except in the educational requirements, wherein a physician must take seven years and an osteopath four. This bill was referred to the Committee on Public Health, and on March 17 was recommended for indefinite postponement by this committee, and on March 18, was indefinitely postponed, so that nothing further in the way of action could be taken on this bill.

A new cult appeared called the naturopaths, and a bill was introduced called House File 261, by Dreessen of Crawford County, Fuester of Ida County, Stanzel of Sac County and Augustine of Ringgold

County, on February 9, which would have created another cult designed largely along the lines of chiropractic, but giving its members far greater powers in the art of healing than is now possessed by the Chiropractic Association. This bill was fostered by the American School of Naturopathy of New York City, aided by certain dissatisfied members of the Chiropractic Association in this state who were inclined to believe that they might change their title from chiropractors to naturopaths, and thereby broaden the scope of their powers. The chiropractic group supporting this bill were a limited number using modalities. This bill was withdrawn from the Public Health Committee on the 14th day of March by action of the members of the House and placed upon the calendar at the request of the authors previously named, but no action was ever taken upon the bill and it was placed in the hands of the sifting committee, from which it was never withdrawn.

Another cult presented a licensing act under House File 302 which was introduced by Johnson of Linn County and was entitled "An Act to Regulate the Practice of Naprapathy, providing for the Licensing and Examination of Naprapaths and the Appointment and Maintenance of a Board of Examiners." This cult is also an offshoot of the chiropractic profession, a definition of naprapathy being, "One who treats human ailments by manipulation of shrunken ligaments and connecting tissues." This particular cult, however, did not desire in any way to use any medicine or operative surgery, but only to carry on their own theory, and this bill was introduced for the particular benefit of three naprapaths in this state who were enjoined late in 1932 from continuing their practice by the Supreme Court of this state. This bill was introduced on the 15th day of February and was sent to the Committee on Public Health, and after several hearings the Health Committee recommended an amendment on the 18th of March, which would have stricken all of their bill and in lieu thereof would have legalized the practice of Naprapathy in this state by the three persons engaged in that practice, but would not have permitted any others to have entered the state or provided for licensing of any in the future. This bill, however, went into the hands of the sifting committee and nothing further was done on the same.

House File 273 was introduced February 13, by Swift of Jackson. This bill had received the support of the Legislative Committee of the State Medical Society and in effect would have redefined osteopathy to mean the treatment of human ailments by manipulation of the limbs, muscles, ligaments and bones, in order to correct displacements and abnormalities of the body, and in addition would have required that any osteopath desiring to practice surgery would have been required to pass the same examination in surgery as would one licensed under the medicine and surgery chapter, and osteopaths in the future would have been prohibited from giving or prescribing any vaccines, serums, drugs or medicine included in materia medica, or from practicing operative surgery. On March 13, this bill was withdrawn from the Health Committee and placed upon the calendar by the House of Representatives. However, no action was taken upon the bill and it was placed in the hands of the sifting committee on the 18th day of March, where it remained at the end of the session. A companion bill, an exact duplicate of House File 273, was introduced in the Senate as Senate File 248 by Senator Irwin of Clinton County, Aschenbrenner of Marion County, and Senator Hush of Montgomery County on the 10th day of February. On the 21st day of February the Public Health Committee in the Senate recommended this bill out for passage and it was placed upon the calendar. On March 16 this bill went to the sifting committee and on March 23, was reported out by the sifting committee for passage and was reached on the calendar on the 29th day of March, at which time Senator Pendray of Jackson County moved that this bill be rereferred to the sifting committee for further study and consideration. A roll call was demanded and the vote was eighteen for re-referring and thirty against. Those voting to re-refer to the sifting committee (a move by the osteopathic profession to kill this bill,) were Calhoun of Keosauqua, Carden of Winfield, Coykendall of Shenandoah, Elthon of Fertile, Hicklin of Wapello, Husted of Truro, Knudson of Ellsworth, McArthur of Mason City, Nelson of Nevada, Pendray of Maquoketa, Reese of Marshalltown, Schmidt of Iowa City, Shangle of Oskaloosa, Frank M. Stevens of Garden Grove, Roy E. Stevens of Ottumwa, Topping of Burlington and Wenner of Waterloo. No further action was taken upon this bill at this time but it was again reached on April 7, at which time on motion of Senator Irwin, this bill was brought up for consideration. Senator Beatty moved that this bill be deferred and retain its place upon the calendar and be not sent to the sifting committee.

Prior to Senator Irwin's motion, Senator White of Vinton had moved that all bills on the calendar after adjournment on April 7, should be re-referred to the sifting committee. Senator Beatty's motion to defer action and that this bill be not sent to the sifting committee was voted down.

The bill was then ready for consideration when Senator Harrington of Sioux City moved that the Senate adjourn until 10:00 o'clock a. m. on Saturday, April 8, which motion prevailed and automatically under the motion previously made by Senator White, re-referred all bills then on the calendar, including Senate File No. 248, to the sifting committee.

While the State Medical Society was unable to secure the passage of its bill, we have at least kept out of Iowa two new cults, the Naprapaths and the Naturopaths and were successful in defeating the attempt of the Osteopaths to broaden the scope of their powers, all in face of a concerted and organized and well-financed program on the part of the Osteopaths, as well as the other cults. In fact it might be well to mention that the Osteopathic profession at no time had less than three well paid lobbyists in

the Legislature and at times had from six to a dozen osteopaths in and around the Senate and House, as well as paid advertisements in the newspapers and a continuous stream of letters and telegrams which were forwarded to the Senators and Representatives by their constituents who were also patients of Osteopaths in their respective communities.

A bill to provide for liens in favor of hospitals furnishing care, treatment and maintenance for persons injured in accidents, said liens to be against any claim, demand, verdict or order in favor of the injured person was introduced in the legislature but was defeated.

Another bill of interest to the medical profession providing that physicians could serve on County Hospital Boards was introduced, but it, too, was defeated.

This, briefly, is the history of the various bills presented in this session of the Legislature, which would affect medicine, either directly or indirectly.

Thomas A. Burcham, Chairman.

Dr. Burcham made the following supplementary report:

The complete report of the Committee on Public Policy and Legislation is reported in the handbook. The two major projects which the Legislative Committee undertook to perform in the last session of the legislature were: (1) change in the medical practice acts and (2) change in the Perkins, Haskell-Klaus laws. The report in its published form shows the results obtained.

There is a special session of the legislature called for August of this year and I think this House should go on record at this time and instruct the Legislative Committee to continue its efforts to have the medical practice acts changed. If you are in favor of doing that, it should be decided at this time. I *move* that the Legislative Committee be instructed to continue its efforts to have changes made in the medical practice acts in the coming session in August, if it is possible to get the proposed legislation before that body. *Motion seconded.*

President Bowen asked for discussion on Dr. Burcham's motion. Dr. Burcham withdrew his motion, stating that he would present it under New Business.

The Secretary *moved* that the report of the Committee on Public Policy and Legislation as printed in the handbook be accepted. *Motion seconded and carried.*

REPORT OF THE COMMITTEE ON SCIENTIFIC WORK

President Bowen stated that the committee had performed no work during the year other than the preparation of the scientific program for the annual session.

REPORTS OF SPECIAL COMMITTEES

President Bowen called for the report of the Committee on Child Health and Protection. Dr. Fred Moore, Chairman, requested the consent of the House to present his report on Friday morning. The request was granted.

REPORT OF THE HISTORICAL COMMITTEE

The department devoted to the History of Medicine in Iowa, published each month in the Journal, indicates the activities of your Committee better than they can be presented in an annual report.

The record of the early period of medical education and medical journalism in Iowa has been made more complete by the collection of data connected with Keokuk as a medical center from 1850 to 1870. We were able in this connection to publish a rare diploma issued by the Iowa Medical College of Keokuk in 1857, a medical school of short life, and of previously quite unknown history.

Interesting data have been added to the medical history of Muscatine, Lee, Washington and Lucas counties. The unusual professional record of Dr. Henry B. Young of fifty-three years of specialized practice in Burlington, as well as that of a number of Iowa physicians who have completed fifty years or more of practice in Iowa, has been of distinct historical interest.

In the March issue of last year appeared a group photograph including Professor Robert Koch, connected with his visit to Iowa in 1908, appropriate to the fiftieth anniversary of the discovery of the tubercle bacillus.

Tributes of regard and accurate biographic data have been recorded with the passing during the past year of our lamented colleagues Macrae, Myers, Crouse, Eiker, McKinley, Lesan, Evans, Magee and Kenefick.

It is gratifying to the Committee to note the increasing interest of the members of the Society to make the history of medicine in Iowa as complete as possible.

With each passing year the opportunity grows less for recording accurate historical facts pertaining to the pioneer period of Iowa medicine.

Respectfully submitted,
Walter L. Bierring, Chairman
Frank M. Fuller
Wm. Jepson
Arthur D. Woods
John T. McClintock

In the absence of Dr. Bierring, chairman of the committee, Dr. Frank M. Fuller, of Keokuk, stated that the committee would like to have historical data from the various counties and *moved* the adoption of the report as printed in the handbook. *Motion seconded and carried.*

REPORT OF THE COMMITTEE ON MEDICAL ECONOMICS

The Medical Economics Committee has taken care of all matters referred to it during the year in four meetings.

Compensation insurance plans took up much of our meeting time during the year. At these meetings we discussed the New York System of cooperation between the medical society and the compensation insurance companies. The sentiment among members consulted concerning the New York System or the Nebraska Plan favored rather than opposed

these innovations. A questionnaire sent to the different compensation companies showed that they were mostly satisfied with the present arrangement of compensation work; therefore the Committee on Medical Economics referred back to the Council, the New York System, with recommendation that it would be inadvisable to attempt such a change at this time.

We found no reason to approve any of the schemes for Insurance Medical Directories which were presented to us.

We held a meeting in which the Fee Schedule was gone over and a rate somewhat lower than the recommended schedule of two years ago was given, to be used in compensation cases. This was to satisfy the contention of compensation carriers, that as their work was always paid for, they should have a smaller charge than those cases in which physicians made charges which were collectable. The committee attaches hereto the revised schedule, and recommends that the Fee Schedule of the Iowa X-Ray Club also be included and accepted by the State Society for the governing of its members in making charges on compensation work.

During the past year the report of the Committee on the Costs of Medical Care in the United States was published. The recommendations of the committee were considered at one of our meetings. At the meeting in Minneapolis in which it was discussed, we had a representative report back to us the gist of the discussion. There were no definite recommendations arrived at by our committee with reference to the different propositions, and it is a subject which should require further consideration and careful thought before launching into any of the proposed plans. There is, however, a definite need that the State Medical Society be in touch with developments along the line of group payment for medical care, and a consequent spread of the cost over a large element of our population. There is need that the thrifty man of small income have a chance to ensure himself the average medical care of the community without exorbitant charges and the physicians should back some such plan. The improvident could then be refused care without injury to the conscience of our individual members or to the prestige of our profession.

John I. Marker, Chairman

MINIMUM FEE SCHEDULE RECOMMENDED BY THE MEDICAL ECONOMICS COMMITTEE FOR USE IN COMPENSATION CASES

General Medicine and Surgery

Abscess, opening	$ 2.00
Amputation, arm or forearm	100.00
Amputation, cervix or coccyx	50.00
Amputation, hip or thigh	200.00
Amputation, finger or toe	15.00
Amputation, leg	$100.00 to 200.00
Anesthetic	10.00 to 20.00
Anesthetic, gas	15.00
Appendectomy	100.00
Aspiration, abdomen, chest, knee	15.00
Cholecystotomy or cholecystectomy	200.00
Colotomy	150.00
Attendance at Court, per day, expenses extra	25.00 to 50.00
Certificate of Health	1.00
Consultation at office	2.00 to 3.00
Consultation by telephone	1.00
Decompression, skull	150.00
Dislocation, ankle, shoulder, wrist, jaw	25.00
Dislocation, elbow, hip, knee	35.00 to 50.00
Dislocation, finger, toe	5.00
Dressing wounds	1.00 to 3.00
Enterorrhaphy, entero-anastomosis	200.00
Examination, involving question at law	25.00
Examination, post mortem, involving legal investigation	50.00
Fissure	25.00
Fistula in ano, operation for	50.00
Fracture, clavicle	30.00
Fracture, radius, ulna, tibia, fibula, maxilla, patella	50.00
Fracture, femur, pelvis (complete care)	100.00 to 200.00
Fracture, ribs, toes, fingers	15.00
Fracture, operation for ununited	150.00
Fracture, if compound or comminuted, 50 to 100 per cent should be added	
Gastro-enterostomy, gastrectomy	200.00
Hemorrhoids	75.00
Herniotomy	75.00
Herniotomy—double, add 50 per cent.	
Hernia—strangulated, add $25.00 to $50.00	
Hernia, strangulated, reduction by taxis	25.00

Dr. Marker, chairman of the committee, *moved* that the report of the committee as printed in the handbook be accepted and called attention to the contents of the report which would come up under New Business. *Motion seconded and carried.*

REPORT OF THE MEDICAL LIBRARY COMMITTEE

Dr. Jeannette Dean-Throckmorton, Librarian, and a member of the Medical Library Committee, has prepared the following statistical analysis of the condition and activities of the Iowa State Medical Library for the past twelve months:

Requests for literature		2,683
Pieces of literature loaned		10,359
Pieces of literature borrowed from other libraries		40
Letters written		1,487
Cards written		997
Visitors in the Library		1,773
Telephone calls coming in (long distance 4)		595
Cards made for new acquisitions—book file	1,247	
journal file	81	
reprint file	3,924	
	5,252	5,252
Periodicals received by subscription regularly	146	
by gift regularly	92	
	238	238
Volumes in the Library June 30, 1932		15,713
(Increase of 1,190 since July 1, 1931)		
Gifts to the Library—books		737
journals (bound)		360
journals (unbound)		12,873
reports		177
transactions and proceedings		55
bulletins		264
reprints		548
pamphlets		246
pictures		1
museum exhibits (7 donors)		
Duplicates given to other Libraries—books		13
journals (bound)		4
journals (unbound)		5,198
transactions		45
reports		7

Felix A. Hennessy, Chairman

General Medicine and Surgery

Paracentesis, abdominal, thoracic	25.00
Plaster cast	10.00
Resection, elbow, hip, knee, jaw	200.00
Resection, rib	50.00
Stomach pump, emergency	15.00
Stomach pump, diagnostic	3.00
Toe-nail, ingrowing, operation for	5.00 to 15.00
Visits, day	3.00
Visits, 9:00 p. m. to 7:00 a. m.	5.00
Visits, each additional visit in same family	1.00
Visits, beyond city limits, regular charge and additional per mile	1.00

Genito-Urinary

Bladder, operation	100.00
Bladder, irrigation	3.00
Bladder, segregation of urine	35.00
Castration	75.00 to 100.00
Circumcision	25.00
Examination and diagnosis of venereal disease	5.00
Gonorrhea, treatment	3.00
Hydrocele, operation for	75.00
Prostatectomy	200.00
Stone in bladder, operation for	100.00
Stone in kidney, operation for	200.00
Ureters, catheterizing	35.00

Eye, Ear, Nose, Throat

Adenoids, operation for	15.00
Cataract, operation for	150.00
Ectropion, entropion, operation for	75.00
Eye, removing foreign body from cornea	2.00
Iridectomy	100.00
Intubation	75.00
Mastoidectomy	125.00
Nasal septum, operation for deflection	75.00
Paracentesis of ear drum	3.00
Pterygium, operation for	50.00
Sinus operation	50.00
Strabismus, operation for	100.00
Tonsillectomy (adenoids $10.00 extra)	30.00

Miscellaneous

Analysis, urine, chemical	1.00
Analysis, urine, complete	5.00
Blood count	2.00
Blood transfusion	50.00
Blood Wassermann	5.00
Immunization, scarlet fever, typhoid, diphtheria	5.00
Salvarsan	15.00
Vaccination	1.00

Assistant's fees, anesthetic and dressings are in addition to the foregoing.

At the request of Dr. Hennessy, Dr. Jeannette Dean-Throckmorton made a supplementary report, in which she thanked the various individual doctors who had made contributions to the library during the past year, and asked for reprints of articles by members, old journals, old fee bills, old books, magazines and instruments. Dr. Dean-Throckmorton reminded the members that the services of the medical library are free and offered to review the literature on any subject for the members, or to send literature to them.

Dr. Hennessy *moved* that the report of the committee as printed in the handbook, together with Dr. Dean-Throckmorton's supplementary report, be accepted. *Motion seconded and carried.*

REPORT OF THE COMMITTEE ON MILITARY AFFAIRS

The Military Surgeon's Club met at the Martin Hotel, Sioux City, at 6:30 p. m. on Wednesday, May 4, 1932, during the annual session of the Iowa State Medical Society. The attendance was much greater than had been anticipated, over 100 members being present, and the meeting was very much worthwhile. The Club went on record as endorsing Dr. Matthew A. Tinley, of Council Bluffs, for the nomination for vice president of the United States on the Democratic ticket.

The members of the Committee on Military Affairs were elected as officers of the Military Surgeon's Club, Dr. A. C. Conaway, of Marshalltown, being elected chairman; Dr. Harold A. Spilman, Ottumwa, vice chairman; and Dr. Thomas Suchomel, Cedar Rapids, secretary. The Committe was instructed to prepare a resolution relative to hospitalization. This resolution appeared in the January issue of the Journal of the Iowa State Medical Society.

The principal speaker of the evening was Colonel George A. Skinner, Surgeon of the Seventh Corps Area, United States Army, Omaha, Nebraska. Following the business meeting and the address of Colonel Skinner, Dr. Gordon F. Harkness was named as toastmaster. Short talks were given by many of the physicians in attendance. The Club adjourned at 8:00 p. m., after voting to hold another meeting at the time of the next annual session.

Aaron C. Conaway, Chairman

In the absence of the chairman of the committee, Dr. Conaway, Dr. T. F. Suchomel *moved* that the report as printed in the handbook be accepted. *Motion seconded and carried.*

President Bowen called for the report of the Committee on Superannuated Physicians. Dr. William F. Amdor, of Carbon, asked permission to report on Friday morning. The request was granted.

REPORT OF THE WOMAN'S AUXILIARY ADVISORY COMMITTEE FOR 1932 AND 1933

There is a definite place for the Woman's Auxiliary to the Iowa State Medical Society. Organization of auxiliaries should be pushed as rapidly as possible. The committee recommends that the Councilors urge county society officers to lend all possible aid to the ladies in this endeavor. Such an organization can do much to increase social life, obviate discouragements, smooth out non-medical tangles and prevent much of the quasi-medical propaganda.

The committee further suggests that a committee representing the Iowa State Medical Society be continued to cooperate with the Woman's Auxiliary.

Under date of May 3, 1933, a letter was received from Mrs. P. B. McLaughlin, the president. We desire to quote one paragraph from this letter: "I really feel we have made some headway in organization. Three new counties joined the State Auxiliary, with several more organized, wanting to wait a little longer before coming in."

C. A. Boice, Chairman
P. B. McLaughlin
E. C. Junger

Dr. Boice *moved* that the report of the committee be accepted. *Motion seconded and carried.*

MEMORIALS AND COMMUNICATIONS

The Secretary asked the assistance of the House in clearing up certain instances in which both the delegate and the alternate from a county society had been seated. This was effected.

NEW BUSINESS

Secretary Parker read the proposed new Article VI of the constitution and *moved* that the amendments to the constitution as proposed in the new Article VI be rejected. *Motion seconded.*

Dr. S. T. Gray stated that the proposed article would give a board of fifteen members, with a quorum of seven, the full authority and power of the House of Delegates between annual sessions and pronounced it a vicious piece of legislation.

President Bowen called for a vote on the motion, which *carried unanimously.*

The Secretary *moved* that the new Article VI as proposed by Dr. Boice be rejected. *Motion seconded and carried.*

The Secretary explained that Article IV as proposed by Dr. Boice dealt with membership in an "association" and that if it were adopted, the constitution would have to be changed in a number of places to agree with this nomenclature. The Secretary *moved* the rejection of this Article. *Motion seconded.*

Dr. Boice stated that the purpose of the proposed amendment was to define membership more clearly and to aid the Secretary in accepting dues and emphasized the importance of Section 1, pertaining to life membership. He pointed out that members still in active practice should not be granted life membership; that life membership should be an honor extended to a member no longer in active practice.

Dr. S. T. Gray stated that a man who has paid his dues for thirty consecutive years and is eligible to life membership, should be granted that honor with full privileges of active membership, including medico-legal protection.

Dr. F. E. Bellinger, of Council Bluffs, expressed the opinion that any man who is in active practice should support the Society financially and every other way.

President Bowen called for a vote on the motion, which *carried.*

The Secretary announced that the proposed amendments to the by-laws presented by Dr. Boice in case the new Article VI should carry, were automatically ruled out by the rejection of Article VI.

The Secretary read Chapter VI, Section 1 of the by-laws and the proposed amendment to this section.

Dr. S. T. Gray asked why the Council should have a chairman if the President were to preside at all meetings, including those of the Council.

Dr. Boice explained that the purpose of the amendment was to make the President the Chairman of the Council, and stated that amendments following the one under discussion would answer Dr. Gray's question.

Dr. Boice: The Council should be that body of the Society which prepares and formulates the policies of the Society and brings them to the House of Delegates for confirmation or rejection. The Council meets several times a year and thoroughly reviews every angle of the various problems which confront it. I have known more than half of the men who have been presidents of the Society; every one was an able president and well worthy of the honor of the Society. A number of them have not been very familiar with the business and educational activities of the State Society. The constitution provides that the Council shall be the organizing and educational department of the Society. To them is assigned the duty of stimulating organization in county societies. The Councilors have been particularly active in recent years.

A man is elected president of this Society because we desire to honor him. If the Council is to continue to do the work it should do, it requires that the same man be in office as Chairman for two or more years, or as long as we can keep him there. The proper functioning of the Council in the interests of the State Society depends upon a number of men working together for several years in order that they may determine the best procedure and policies for the Society. Two or three years ago the Council adopted a resolution which we approved. That approval got us into trouble a year later because we approved it without studying it thoroughly. If the same group of men stay together for a number of years, they will be hard to fool after the first year or two. We have had a very satisfactory Chairman for the past two or three years, continuing the same policies for the good of the Society. Such an undertaking cannot be accomplished if a new man is made Chairman each year, even though the ablest man be elected president. The president as a member of the Committee on Scientific Work has enough to do in arranging the scientific program without serving also as Chairman of the Council.

President Bowen explained that the proposed amendments to the by-laws could not be voted upon until Friday.

The Secretary read the proposed Section 4 of Chapter VI.

The Secretary, having been granted the privilege of reading the remaining proposed amendments, read the following sections with their proposed amendments: Section 5 of Chapter VI; Sections 1 and 4 of Chapter VII; Sections 1, 8 and 10 of Chapter VIII; Section 1 of Chapter IX. Concerning the last amendment, Dr. J. C. Parsons, of Creston, asked if the amendment intended to prorate dues to new members on a monthly or on a quarterly basis.

The Secretary *moved* to amend the proposed amendment by inserting the word "quarterly" after the word "prorated." *Motion seconded and carried.*

The Secretary then read the following amendments, proposed in case Article VI should fail to carry: Section 5 of Chapter VI and Section 1 of Chapter VII.

The Secretary *moved* that the reading of these amendments to the by-laws be considered the first reading and that they be laid over until Friday morning for action. *Motion seconded and carried.*

The next order of business was a discussion of the report of the Committee on Public Policy and Legislation.

Dr. Burcham, Chairman of the Committee, *moved* that the House of Delegates go on record as instructing the Committee on Public Policy and Legislation to continue its activities along the line as attempted in the last session of the legislature. *Motion seconded and carried.*

Dr. Burcham explained that the activities of the Committee in attempting to change the Perkins, Haskell-Klaus laws ceased when the legislative committee was appointed by the Governor, the Lieutenant-Governor and the Speaker of the House, under House Joint Resolution No. 7, and that the report of that joint committee was incorporated in the report of the Legislative Committee of the State Society. He asked that the House of Delegates go on record either in favor of the report of the joint committee or otherwise, and instruct the Committee on Public Policy and Legislation as to whether it should attempt to carry out the policies of that joint committee.

Dr. E. B. Williams, of Montezuma, *moved* that the following resolution be approved: BE IT RESOLVED, That we, the House of Delegates of the Iowa State Medical Society, fully approve the report of the Committee appointed under House Joint Resolution No. 7 of the Forty-fifth General Assembly, and that we ask the state legislature at the earliest possible time to enact laws carrying out the ideas and plans as suggested in the report of that committee, printed in the handbook of the House of Delegates. *Motion seconded and carried.*

Upon the instruction of President Bowen, the delegates convened in district caucuses for the purpose of electing a Nominating Committee. Dr. L. C. Kern, of Waverly, was elected Chairman of the Caucus.

The following delegates were elected as members of the Nominating Committee:

First district—Dr. R. L. Whitley, Osage.

Second district—Dr. E. L. Wurtzer, Clear Lake.

Third district—Dr. W. R. Brock, Sheldon.

Fourth district—Dr. M. A. Armstrong, Newell.

Fifth district—Dr. E. B. Bush, Ames.

Sixth district—Dr. H. P. Engle, Newton.

Seventh district—Dr. T. F. Suchomel, Cedar Rapids.

Eighth district—Dr. H. B. Young, Burlington.

Ninth district—Dr. F. L. Nelson, Ottumwa.

Tenth district—Dr. W. F. Amdor, Carbon.

Eleventh district—Dr. E. A. Moore, Harlan.

(At a later meeting, Dr. F. E. Bellinger, of Council Bluffs, was named in the place of Dr. Moore, from the eleventh district.)

Thursday Afternoon, May 11*

The House of Delegates convened in special session in the Adam Room of the Hotel Fort Des Moines at 4:00 p. m. on Thursday, May 11, 1933. Roll call by registration showed the presence of 50 delegates, 8 alternates and 11 officers, or a total of 69.

President Bowen announced that the meeting had been called to decide the Monroe County Medical Society matter and asked Dr. Woodward, as Chairman of the Council, to present his report.

Dr. Woodward summarized the activities of the special committee of the Council, appointed to investigate the Monroe County Medical Society situation, and briefly reviewed the findings of that special committee. Dr. Woodward stated that the Council hoped for final settlement at that time, as the matter had already consumed too much time; that the Council wanted the matter settled without malice and that it would be entirely willing to reach any compromise measure which would accomplish a final settlement of the problem.

Dr. Woodward read the resolution passed by the Council at its meeting on February 16, 1933:

"For persistent violation of Section 5 of Chapter XII of the by-laws by the Monroe County Medical Society; an appeal having been taken to the Council by certain physicians of that county—aggrieved at the refusal of membership—under Section 6 of Chapter XII of the by-laws; the Council, after full and complete study of all the data on file (Section 7, Chapter XII) had directed the said society to accept the dues (under Section 7 of Chapter XII) of said physicians not later than September 1, 1932.

"The foregoing order not having been complied with; the Council—under Section 7 of Chapter XII of the by-laws—('If all efforts at conciliation and compromise fail, the Council shall decide what action shall be taken, and its action shall be final')—hereby directs that the House of Delegates—Section 3 of Chapter XII of the by-laws — at once revoke the charter of the Monroe County Medical Society."

Dr. Prince E. Sawyer, of Sioux City, *moved* that the report of the Council be approved at this time. Dr. T. F. Suchomel *seconded the motion.*

Dr. H. B. Young, of Burlington, related his personal experience in withdrawal from a county medical society and moved to amend the pending motion: "I *move* that that part of the Council report referring to the Monroe County Medical Society, be referred back to the Council, with instructions to re-allocate these men in adjoining county societies if they are found worthy, in full settlement of all questions which have been raised by this contest. *Motion seconded.*

Dr. C. S. Kennedy, of Logan, stated that if the matter of incorporation could be eliminated from the problem, then he favored the amendment; if not, then

*(This is a condensed report of the Thursday meeting. For obvious reasons, the Secretary did not consider it feasible to publish a verbatim report of the proceedings. However, the verbatim report is on file in the central office and is available to any member who wishes to review it there.)

the House should vote down the amendment and stand behind the recommendation of the Council.

Dr. T. A. Moran, Secretary of the Monroe County Medical Society, asked for the privilege of the floor for all members of the Monroe County society.

President Bowen referred the request to the House of Delegates.

Dr. A. W. Erskine, of Cedar Rapids, *moved* that any member of the Monroe County Medical Society be given the privilege of the floor. *Motion seconded and carried.*

Dr. E. B. Bush, of Ames, asked that he be allowed to move that the President suspend rules and pass the motion under that condition.

President Bowen ruled that this procedure was unnecessary.

Dr. Sawyer rose to a point of order and asked how the members of the Monroe County Medical Society could appear on the floor of the House when the Council had brought in a resolution revoking the charter of the county society.

President Bowen ruled that discussion must be on the amendment to the original motion.

Dr. Moran presented the case for the Monroe County Medical Society.

Dr. T. U. McManus, of Waterloo, urged the House of Delegates to vote down the amendment and adopt the advice of the Council. He explained that this action would not necessitate the members of the county society individually staying outside the state medical society and the American Medical Association, since there is provision in the constitution and by-laws whereby they might join through other county societies.

The meeting of the House adjourned to the Cabin of the Fort Des Moines Hotel, where it reconvened immediately.

Dr. J. I. Marker, of Davenport, inquired as to the number of Monroe County society members present. It was learned that there were five present, or a quorum of the county society.

Dr. Marker asked if these members would be willing to include in their articles of incorporation a clause which would exempt personal property liability and stated that if they would be willing to do so, the Council would be with them; but if they were not, the House of Delegates should uphold the Council.

Dr. S. T. Gray, of Albia, announced that Dr. Woodward had something to bring up which would settle the whole affair.

Dr. Woodward asked if it would be possible for a committee of the House of Delegates to get together with the two sides and work out the problem to a satisfactory solution, and asked how long that procedure would keep the matter open.

Dr. Gray asked permission to make a motion.

President Bowen ruled him out of order.

Dr. Gray explained that he wished to make a motion to the effect that the chair appoint a committee to investigate and consider this question fully and report to the House of Delegates.

Dr. Marker moved that all motions be laid on the table until the following morning.

There was a motion to adjourn.

President Bowen ruled both motions out of order as tending to defeat the purpose of the special called meeting.

President Bowen put the question on the amendment to the original motion.

Dr. J. A. Downing, of Des Moines, objected that the question was out of order after motions to table and adjourn.

President Bowen ruled the objection out of order.

Dr. Moran appealed from the decision of the chair.

President Bowen stated there was no appeal from the decision of the chair.

The question was put, and *the amendment was lost.*

Dr. Gray asked permission of the chair to have a poll of the members of the Council as to whether they approved in full the report as printed in the handbook. President Bowen assured Dr. Gray that the report had been unanimously approved by the Council.

Dr. Gray asked the privilege of the floor, and presented the matter, as delegate from Monroe County.

Dr. R. M. Sorensen, of Cumberland, asked Dr. Gray if the men in the Monroe County Medical Society would accept the report of the committee appointed under Dr. Woodward's suggestion. Dr. Gray replied that he did not know.

Dr. Sorensen suggested that the members present from Monroe County vote on the matter.

Dr. C. B. Taylor, president elect, stated that Dr. Gray had admitted to him that he would take the advice of a committee appointed from the House of Delegates.

Dr. Gray stated that he would abide by the decision of such a committee.

Dr. Taylor suggested that the Chairman of the Council move that the President appoint a committee whose action would be final.

Dr. Gray *moved* that the motion at present on the floor be indefinitely postponed. Dr. Woodward *seconded the motion.*

Dr. Sawyer objected to further efforts at conciliation and stated that the action of the Council should be considered as final. He stated that Dr. Gray alone should not agree to abide by the decision of a committee; that such agreement should be made by every member of the county society.

President Bowen questioned individually Drs. Moran, Castles, Powell and Stafford, asking them if they would abide by the decision of a House of Delegates committee appointed to investigate thoroughly the Monroe County problem. Each in turn replied that he would be willing to abide by such a decision.

Dr. Sawyer asked that his motion be voted upon. Dr. Woodward replied that it was the desire of the Council to settle the question without personal grievance, and that a nice way to turn down a motion was to postpone it indefinitely.

The question was put on the motion to postpone indefinitely the original motion. *Motion carried.*

Dr. Woodward *moved* that the matter of the Monroe County situation be referred to a committee of three members of the House of Delegates, appointed by the President, with authority to settle the Monroe County situation, and that its decision be accepted as final. Dr. Spilman *seconded the motion. Carried.*

The meeting adjourned at 6:00 p. m.

Friday, May 12

The House of Delegates convened for its third meeting in the Assembly Room of the Hotel Fort Des Moines on Friday morning, May 12. President Bowen called the meeting to order at 8:00 a. m. Roll call by registration showed the presence of 53 delegates, 10 alternates and 18 officers, or a total of 81.

The Secretary read an abstract of the minutes of the Wednesday meeting and *moved* that the minutes as read be approved. *Motion seconded and carried.*

The Secretary read an abstract of the special meeting on Thursday.

President Bowen explained that his action on the preceding day in ruling certain motions out of order may have seemed unparliamentary, but in reality was within the bounds of parliamentary rule, since the motions, if passed, would have entirely defeated the purpose of the meeting. He asked that this reason for his action be incorporated in the minutes.

The President also asked that the names of each of the Monroe County members who had agreed to abide by the decision of a House of Delegates committee appear in the minutes.

Dr. S. T. Gray *moved* that the minutes, with additions as indicated by the President, be approved. *Motion seconded and carried.*

REPORT OF THE NOMINATING COMMITTEE

Dr. T. F. Suchomel, secretary of the Nominating Committee, presented the following report:

The committee held two meetings, the first on Thursday morning and the second on Thursday afternoon, and final action was taken at the second meeting.

Your committee recommends the following nominations:

President elect: Gordon F. Harkness, Davenport; Thomas A. Burcham, Des Moines; George B. Crow, Burlington.

First vice president: William E. Ash, Council Bluffs.

Second vice president: Frank H. Conner, Nevada.

Secretary: Robert L. Parker, Des Moines.

Treasurer: Harold J. McCoy, Des Moines.

Trustee: John I. Marker, Davenport.

Delegate to the American Medical Association: Fred Moore, Des Moines. Alternate: N. G. Alcock, Iowa City. Alternate for Dr. Thornton: W. E. Long, Mason City.

Councilors:

Second district: L. R. Woodward, Mason City.

Fourth district: James E. Reeder, Sioux City.

Sixth district: James C. Hill, Newton.

Seventh district: Arthur W. Erskine, Cedar Rapids.

The Nominating Committee recommends that owing to increased expense in holding a meeting in cities other than Des Moines, the State Society return to Des Moines for its annual session in 1934. The Trustees and officers of the State Society are endeavoring to establish a precedent in that the State Society will contribute an amount not to exceed $250.00 toward the expense of the annual meeting in Des Moines or elsewhere, the county society acting as host to pay the balance.

Dr. Suchomel *moved* that the report of the Nominating Committee be accepted. Dr. Boice *seconded the motion. Carried.*

President Bowen appointed the following members to act as tellers during the balloting for president elect: Dr. T. F. Suchomel, Cedar Rapids; Dr. R. M. Sorensen, Cumberland.

President Bowen announced that the first ballot for president elect would be an informal one.

The informal ballot resulted in the nomination of Dr. Gordon F. Harkness and Dr. Thomas A. Burcham, with Dr. Harkness receiving a majority of the total votes cast.

Dr. Bush *moved* that the rules be suspended and that the informal ballot be considered a formal ballot. *The motion was seconded and carried.*

President Bowen declared Dr. Gordon F. Harkness the president elect of the Iowa State Medical Society.

Dr. Suchomel *moved* that the rules be suspended and that the Secretary be instructed to cast a unanimous ballot for the remaining names on the ticket submitted by the Nominating Committee. *The motion was seconded.*

Dr. T. F. Thornton, of Waterloo, reminded the House of the death of the sixth district Councilor during the year, and of the appointment by the Board of Trustees of Dr. C. W. Ellyson, of Waterloo, to fill the vacancy up to the time of the annual session. Dr. Thornton placed the name of Dr. Ellyson in nomination as Councilor for the sixth district.

Dr. Fred F. Agnew, of Independence, a former member of the Council, stated that no one man elected to the Council can hit his stride short of a year's service and spoke of the capable, consistent and honest efforts of Dr. Ellyson in his district. It was Dr. Agnew's opinion that Dr. Ellyson should be returned as a member of the Council.

President Bowen announced that he would entertain a motion to allow the Secretary to cast a unanimous ballot for the officers proposed by the Nominating Committee, with the exception of the nominee for Councilor of the sixth district. Dr. Suchomel so *moved. The motion was seconded and carried.*

The Secretary having cast a unanimous ballot as instructed, President Bowen declared the following officers elected:

First vice president, William E. Ash; second vice president, Frank H. Conner; Secretary, Robert L. Parker; Treasurer, Harold J. McCoy; Trustee, John I. Marker; Delegate to the American Medical Association, Fred Moore; Alternate, N. G. Alcock; Alternate for Dr. Thornton, W. E. Long; Councilor of the second district, L. R. Woodward; Councilor of the fourth district, James E. Reeder; Councilor of the seventh district, Arthur W. Erskine.

Dr. Bush announced that the Nominating Committee had brought in the name suggested for Councilor of the sixth district through the solicitation of the Nominating Committee member from the sixth district.

The result of a formal ballot for election of Councilor of the sixth district was as follows: C. W. Ellyson, 62; J. C. Hill, 21.

President Bowen declared Dr. Ellyson elected as Councilor of the sixth district.

President Bowen announced that the annual session in 1934 would be held in Des Moines.

President elect Taylor stated that heretofore there had been no accurate provision in the constitution and by-laws for the appointment of committee members and that they had previously been named by the Nominating Committee. Because he had not had sufficient time for careful selection of committee members, the former committees would for the most part be reappointed. Dr. Taylor announced the following appointments:

Committee on Constitution and By-laws

John H. Peck, Chairman....Des Moines
Channing G. Smith....Granger
James C. Donahue....Centerville

Medico-Legal Committee

Frank A. Ely, Chairman....Des Moines
George C. Albright....Iowa City
F. Earl Bellinger....Council Bluffs

Committee on Public Policy and Legislation

Thomas A. Burcham, Chairman....Des Moines
Frank L. Williams....Des Moines
Peter A. Bendixen....Davenport

Committee on Child Health and Protection

Fred Moore, Chairman....Des Moines
E. D. Plass....Iowa City
J. D. Boyd....Iowa City
Lee F. Hill....Des Moines
H. E. Farnsworth....Storm Lake

Historical Committee

Walter L. Bierring, Chairman....Des Moines
Frank M. Fuller....Keokuk
Thomas B. Throckmorton....Des Moines
John T. McClintock....Iowa City
Henry B. Young....Burlington

Medical Library Committee

Felix A. Hennessy, Chairman....Calmar
C. R. Harken....Osceola
Jeannette Dean-Throckmorton....Des Moines

Military Affairs Committee

T. F. Suchomel, Chairman....Cedar Rapids
H. A. Spilman....Ottumwa
Mark C. Jones....Boone

Committee on Superannuated Physicians

William F. Amdor, Chairman....Carbon
W. S. Greenleaf....Atlantic
Fred G. Murray....Cedar Rapids

Woman's Auxiliary Advisory Committee

Emil C. Junger, Chairman....Soldier
O. A. Kabrick....Grandview
James M. Donelan....Glenwood
P. B. McLaughlin....Sioux City
E. B. Howell....Ottumwa

Dr. Taylor asked permission to announce later the appointment of other committees.

Dr. Taylor *moved* that the report of the President elect on committee appointments be accepted. *Motion seconded and carried.*

The Secretary *moved* that the report of the Committee on Professional Relations be approved. *Motion seconded and carried.*

REPORT OF COMMITTEE ON SUPERANNUATED PHYSICIANS

Dr. William F. Amdor presented the following report:

After investigation we are unable to find any reputable physicians in Iowa in need of financial assistance from the Society at this time.

Dr. Amdor *moved* that the report be accepted. *Motion seconded and carried.*

REPORT OF COMMITTEE ON PUBLIC RELATIONS

To the Council of the Iowa State Medical Society:

The members of your Committee on Public Relations have endeavored since their appointment in August, 1932, to gain all possible information in regard to committees of similar nature connected with other state medical societies.

The committee recognizes as its particular function in Iowa, the promotion of closest coordination with the different committees of the Council and the House of Delegates concerned with the relation of the Iowa State Medical Society to public affairs, as well as with all lay organizations interested in the prevention and control of disease.

The presentation of approved information regarding the true relation of scientific medicine to the social and economic welfare of our people will have a distinct appeal and bring about a higher appreciation of the well trained physician in modern society.

Your committee feels unable at this time to make a more extended report.

Respectfully,
Walter L. Bierring, Chairman.
Raymond S. Grossman,
Ezra L. Wurtzer.

The Secretary *moved* that the report of the Committee on Public Relations be accepted. *Motion seconded and carried.*

REPORT OF COMMITTEE ON CHILD HEALTH AND PROTECTION

Dr. Fred Moore, Chairman of the committee, presented the following report:

During this last year the Council appointed a special committee to study the work of the Bureau of Maternity and Child Hygiene. I would ask that the House of Delegates consider carefully the difference in time of the recommendations of the Council committee in February, and the considerations of this committee during the last two weeks. While the Council committee recommended that the appropriation for the work be eliminated, this was not done. There is an appropriation and the work is going on. As a profession we must engage in some activities in the field of education and preventive medicine. It becomes a question whether or not organized medicine is going to provide intelligent leadership for those things, or whether we are simply going to continue in a haphazard manner and let the work be directed by such persons as may be interested in it.

Your committee has conferred with numerous people in its attempt to develop a basis for coordination of efforts. The proposal which I shall submit to you has been approved by the committee and by the pediatricians of the state. It has been submitted to the Council and they are capable of speaking for themselves.

Subject: A plan for developing cooperation in the related activities of the Iowa State Medical Society and the Bureau of Maternity and Child Hygiene of the State Department of Health.

The following is offered solely as a basis for discussion of the subject.

The following facts should characterize these activities:

1. The fundamental purpose is educational.
2. Participation in local activities by the local medical profession. This is essential to success.
3. Each county society should appoint a committee on Child Health and Protection to which all such matters should be referred. This committee should consider the questions at issue and make recommendations to the county society.
4. Activities should be conducted in such a manner as will stimulate local participation in projects of the Bureau.
5. Activities involving medical services should meet certain standards as outlined by the local profession, preferably the county medical society. Suggestions as to standards are as follows:
   a. Local medical men shall approve the arrangement for the conduct of such services.
   b. Visiting clinicians should be chosen and invited by the local medical profession.
   c. Basis of compensation for medical services to be arranged between the local medical profession and the organization sponsoring the activities.
6. The Iowa State Medical Society should encourage participation by its members in activities that are set up in accordance with these standards.

Desirable activities for cooperative efforts between the Iowa State Medical Society and the Bureau of Maternity and Child Hygiene of the State Department of Health.

I. Maternal Health Services.

The Committee believes that acceptable and valuable activities can be carried on in this field and suggests the following for consideration.

1. Some studies of medical interest pertaining to complications of pregnancy that occur in Iowa. The selection and plan of such studies should be agreed upon by the Bureau of the State Department, the State Medical Society through its Council, and the Department of Obstetrics at the State University Medical School.

2. Nutrition of Pregnancy.

An outline endorsed by:

The Bureau of Maternity and Child Hygiene.

The Department of Obstetrics of the State University of Iowa.

The Iowa State Medical Society.

Subject to modification by the personal physician. Available through physicians.

II. Children's Health Service.

1. Infant feeding. Arranged in accordance with standards as set forth previously.

2. Preschool examinations.

3. Summer Roundup.

4. Immunization. (Materials for indigent children to be supplied by the State Department of Health, up to a designated per cent of the population.)

5. Pediatric Clinic. At request of local medical profession.

III. School Health Programs—an advisory service.

IV. Advisory service for lay organizations with health programs.

In connection with the above services, the members of the Iowa State Medical Society who are willing to serve as speakers, demonstrators, or clinicians, should be listed with the Speakers Bureau. In this manner the talent of the profession of the State can be used for the development of the program.

If this outline meets with your approval, the committee suggests that it might be specifically designated that it should continue to develop this work in connection with the Commissioner of Health and the Council, and tie the thing into the Council, making it necessary that this committee confer with the Council at its regular meetings. The whole thing involves too much a policy of the State Medical Society to turn it loose in an unattached committee; it should be tied in closely with the work of the Council.

Dr. Moore *moved* that this report be received and approved. *Motion seconded and carried.*

The Secretary reported that he had received application for life membership in the Society for Dr. Jennie M. Coleman, of Des Moines, and for Affiliate Fellowship in the American Medical Association for Dr. Andros Carson, of Des Moines.

Dr. H. B. Young, of Burlington, requested that life membership be granted to Dr. J. P. Mathias, of Mediapolis, in Des Moines County.

Dr. S. T. Gray stated that life memberships are not voted by the House of Delegates.

Secretary Parker read Section 6 of Article IV of the constitution, pertaining to life membership, and explained that life membership is automatically granted to those who have held membership for thirty consecutive years, upon the certification of the county society secretary, but to those "other worthy members" for which the constitution provides life membership, such membership can be granted only by unanimous vote of the House of Delegates.

The Secretary *moved* that life membership be granted to the following:

Davis County: Dr. C. C. C. Heady, Bloomfield.

Des Moines County: Dr. J. P. Mathias, Mediapolis.

Linn County: Dr. Ward Woodbridge, Central City; Dr. John Blair Robinson, Mount Vernon.

Muscatine County: Dr. George D. Lezotte, Muscatine.

Polk County: Dr. Jennie M. Coleman, Des Moines.

Taylor County: Dr. J. W. Beauchamp, Bedford.

Washington County: Dr. E. T. Wickham, Washington.

Motion seconded and carried.

The Secretary *moved* that Dr. Andros Carson be approved for Affiliate Fellowship in the American Medical Association. *Motion seconded and carried.*

At the request of President Bowen, the Secretary gave the second reading of the proposed amendments to the by-laws, introduced by the Committee on Constitution and By-laws at the Wednesday afternoon meeting.

Dr. H. C. Young *moved* that the proposed amendment to Section 1 of Chapter VI be rejected. *Motion seconded and carried.*

Dr. S. T. Gray *moved* that the proposed amendment to Section 4 of Chapter VI be rejected. *Motion seconded.*

Dr. J. F. Loosbrock stated that inasmuch as the office of Secretary of the Council entails considerable correspondence, and since the Secretary of the Society has access to the central office and its files, the latter officer should act also as the Secretary of the Council.

President Bowen asked for a vote on the motion, which *carried.*

Dr. H. C. Young *moved* that the first proposed amendment to Section 5 of Chapter VI be approved. *Motion seconded and carried.*

Dr. O. J. Fay *moved* that the second proposed amendment to Section 5 of Chapter VI be approved. *Motion seconded.*

President Bowen explained that under the present setup the Board of Trustees is the executive body of the Society in the interval between annual sessions of the House of Delegates, and that to take away from the Board the authority to make interim appointments would be to weaken the organization.

Dr. Gray stated that if the amendment under discussion were approved, the authority to make interim appointments would not be given to the Council; another amendment would be necessary to grant the Council this authority.

President Bowen asked for a vote on the motion, and the *motion was lost.*

Dr. R. M. Sorensen *moved* that the first proposed amendment to Section 1 of Chapter VII be rejected. *Motion seconded and carried.*

Dr. W. T. Peters *moved* that the second proposed amendment to Section 1 of Chapter VII be rejected. *Motion seconded and carried.*

Dr. Gray *moved* that the proposed amendment to Section 4 of Chapter VII be rejected. *Motion seconded and carried.*

Dr. H. C. Young *moved* that the first proposed amendment to Section 1 of Chapter VIII be rejected. *Motion seconded and carried.*

Dr. O. J. Fay *moved* that the second proposed amendment to Section 1 of Chapter VIII be approved. *Motion seconded and carried.*

Dr. J. I. Marker *moved* that the proposed amendment to Section 8 of Chapter VIII be rejected. *Motion seconded and carried.*

Dr. H. C. Young *moved* that the proposed amendment to Section 10 of Chapter VIII be rejected. *Motion seconded and carried.*

Dr. O. J. Fay *moved* that the first proposed amendment to Section 1 of Chapter IX be approved. The motion was *seconded* by Dr. E. D. Plass and *carried.*

Dr. E. L. Bower *moved* that the second proposed amendment to Section 1 of Chapter IX be approved as amended. *Motion seconded and carried.*

The next order of business was a discussion of the two amendments proposed in case Article VI should fail to carry, necessitated by the rejection of the proposed Article VI at the Wednesday meeting.

Dr. J. P. Reed *moved* that the proposed amendment to Section 5 of Chapter VI be rejected. *Motion seconded and carried.*

Dr. R. M. Sorensen *moved* that the proposed amendment to Section 1 of Chapter VII be rejected. *Motion seconded.*

President Bowen stated that during his term of office the Council and the Board of Trustees had been very courteous and had invited him to all meetings; however, the President has no voice in these meetings.

President elect Taylor stated that the officers of the Society should have the right to attend all meetings of the Council and the Board of Trustees, although this right was not specifically designated to them by the constitution and by-laws. He doubted, however, that the officers should have a vote in these meetings.

Dr. O. J. Fay suggested that the word "ex-officio" be inserted in the proposed amendment.

The Secretary read the proposed amendment with the word "ex-officio" inserted, and stated that this word had been overlooked in the first reading: "The Council shall consist of the Councilors and, ex-officio, the President, the President-elect, the Secretary and the Treasurer of the Society. Eight of its members shall constitute a quorum."

Dr. A. W. Erskine pointed out that the amendment could not be passed at that session with the changed wording, since it would have to lay over for at least one day.

President Bowen called for a vote on the motion before the House. *The motion carried.*

Dr. George Keeney *moved* that the House of Delegates ask the officers to attend the meetings of the Council during the coming year. *Motion seconded and lost.*

The Secretary called the attention of the House to the amendment to the by-laws proposed by Dr. S. T. Gray and introduced by Dr. Swift at the Wednesday meeting. Dr. H. C. Young *moved* that this amendment be rejected. Motion *seconded* by Dr. Fay and *carried.*

The Secretary called the attention of the House to the proposed Section 5 of Chapter VII of the by-laws, proposed by Dr. Boice and introduced by Dr. Swift at the Wednesday meeting.

Dr. E. B. Bush *moved* that the proposed section be rejected. Motion *seconded,* and after brief discussion, *carried.*

President Bowen announced that the next order of business would be a decision as to the amount of the annual assessment for the year 1934. He stated that in his opinion the present assessment is as small as it can be to carry on the functions of the Society, and emphasized the necessity of a sufficiently large fund for legislative work.

Dr. O. J. Fay *moved* that the dues be fixed at $10.00 for the current year. *Motion seconded.*

Dr. J. P. Reed asked if the dues income of the Society were greater with $10.00 dues than it had been with $7.50 dues. The Secretary stated that it was greater.

Dr. E. B. Bush reported that the Story County society would probably be short not more than two or three members by the end of the year, in spite of the fact that many had found it difficult to pay their dues because of bank closures.

Dr. C. S. Kennedy stated that to succeed, the Society must have a program of development which would reach into every district and every county in the state; that with an annual assessment of $10.00 per capita the Society could have a corresponding program and give corresponding service. He urged that the minimum annual assessment be $10.00.

Dr. H. B. Young suggested that the reserve fund of the Society be used to carry on the program.

Dr. E. C. Junger proposed that only a small assessment be charged to young physicians entering the Society and that the dues be increased with their term of membership.

The President asked for a vote on the motion before the House. *The motion carried.*

President Bowen announced the appointment of a committee of three members of the House of Delegates with authority to investigate the Monroe County problem and to reach final settlement. Dr. L. C. Kern, of Waverly, chairman; Dr. E. B. Bush, of Ames; Dr. R. M. Sorensen, of Cumberland.

Dr. Russell C. Doolittle introduced the following resolution:

Whereas, an invitation has been extended by the Polk County Medical Association and the Des Moines Convention Bureau to the American Association for the Study of Goiter to hold their annual convention in Des Moines in 1934.

Therefore, Be It Resolved, That the Iowa State Medical Society endorse the invitation and pledge our individual and collective support in creating interest and attendance throughout the state and urge that favorable consideration be given the invitation to be presented at the annual convention in Memphis, Tennessee.

Dr. Doolittle *moved* that the resolution be adopted. *Motion seconded and carried.*

Dr. E. B. Bush reported that at the annual meeting of the Military Surgeons Club of the Iowa State Medical Society, on May 10, 1933, the following resolution had been presented and adopted:

Be It Resolved, That the Governor of the State of Iowa be commended for his prompt action to maintain respect for law and order in this state, in sending the National Guard to restore order in northwestern Iowa.

Dr. Bush *moved* that the resolution be adopted by the House of Delegates. *Motion seconded and carried.*

Dr. O. J. Fay *moved* that a copy of the resolution be sent by the Secretary to the Governor of Iowa. *Motion seconded and carried.*

Upon *motion, seconded and carried,* the meeting adjourned at 10:45.

WOMAN'S AUXILIARY NEWS

Edited by the Press and Publicity Committee
Mrs. Oliver J. Fay, *Chairman*
10 Thirty-fifth Street, Des Moines

A DELEGATE ATTENDS THE ANNUAL MEETING OF THE WOMAN'S AUXILIARY IN MILWAUKEE

The Annual Meeting of the Woman's Auxiliary to the American Medical Association was held in Milwaukee, June 12th to 16th. It was my privilege to attend the Auxiliary Meeting as a delegate from Iowa, and I have been asked to relate some of my impressions.

The Woman's Auxiliary meeting was very well attended, over four hundred delegates and members being present at some of the social functions. The Hotel Pfister was designated as headquarters and the local arrangements committee is to be especially commended on the way it handled the registration, exhibits and entertainment. In the lobby of each hotel a local hostess presided over a desk at which one could get any desired information, as well as tickets for the various entertainments. Upon my arrival, I was surprised and pleased to find fresh flowers in my hotel room with a welcoming note from the Woman's Auxiliary of Wisconsin. I have attended several A.M.A. meetings but I have never attended a meeting where the local auxiliary was so hospitable or planned such elaborate entertainment for the visiting women.

Among the outings was a trip through the beautiful gardens of Milwaukee; a trip to the Carnation Milk Plant, with a complimentary luncheon; and a series of lovely teas in some of the fine homes of Milwaukee. On the evening of the doctor's stag dinner the women were entertained at the Milwaukee Women's Club for dinner followed by a musicale of unusual merit. Dances were planned for two evenings including the President's Ball at the Hotel Schroeder (headquarters of the A.M.A.). It was indeed a joy to see our own Dr. and Mrs. Walter L. Bierring of Des Moines in the receiving line and I know that your hearts will swell with pride to know that Iowa has been honored by having Dr. Bierring chosen as President Elect of the American Medical Association. This is the only instance where Iowa has been thus honored. Space will not permit me to tell of the smaller parties given by local doctors and their wives but lovely things were planned for every moment of the stay in Milwaukee.

The meetings of the Auxiliary were conducted by the President, Mrs. James F. Percy of Los Angeles. She presided beautifully and the meetings were an inspiration to those in attendance. The opening session was devoted to reports of officers and chairmen of standing committees. The second session was opened by the presentation of a memorial service in honor of Mrs. Walter Jackson Freeman. Mrs. Freeman was president of the Auxiliary last year and after returning from a strenuous visit to many of the auxiliaries throughout the states, passed away at her home in Philadelphia. The President of the Pennsylvania Auxiliary read a beautiful tribute in Mrs. Freeman's honor.

After the memorial service the reports of the states were given and it was a real "eye opener" to hear of all the fine work being done by the doctors' wives throughout the United States. We are urged to do "health work" largely through the affiliation of our doctors' wives with local clubs of the various communities. Because of the absence of our state president, Mrs. P. B. McLaughlin of Sioux City, I was privileged to give the report for Iowa, which showed a gain in membership and activity. Mrs. Walter L. Bierring and Mrs. J. F. Auner also represented Iowa as delegates and we attended most of the meetings together.

The third day was devoted to election of officers and other business. Mrs. Robert W. Tomlinson of Wilmington, Delaware, was named President Elect for the coming year. She is the retiring treasurer and her fund of knowledge of auxiliary work will make her invaluable in her new office. A question box took up the fourth morning and the time was profitably spent discussing the problems of auxiliary work in general.

I must not forget the exhibits. This is the first year there has been an exhibit of work done by the Women's Auxiliary. It included scrapbooks compiled by the publicity chairmen of the various auxiliaries, hospital supplies and garments made by the members, and the work from various institutions sponsored by auxiliaries. It was all very interesting.

I hope next year that all our doctors' wives will attend the A. M. A. meeting in Cleveland with their husbands. I am sure that they will be inspired to come home and make of the Iowa Auxiliary, a progressive and functioning organization.

Mrs. T. B. Throckmorton.

(Auxiliary News continued on next page)

Harrison County Auxiliary Organized

Thursday, June 22, the newly organized Woman's Auxiliary to the Harrison County Medical Society met in Dunlap. Mrs. William A. Seidler of Jamaica, president of the state auxiliary, was present, as well as Mrs. P. W. Beckman of Perry, and both ladies spoke briefly on auxiliary work. The election of officers resulted as follows: Mrs. D. Williams of Logan, president; Mrs. A. B. Bergstrom of Missouri Valley, secretary, and Mrs. H. N. Anderson of Woodbine, treasurer.

Mills County

The mid-summer meeting of the Mills County Auxiliary was held Thursday, June 22, in Glenwood, and the following program was presented: Report of State Convention, Mrs. M. S. Campbell; Things a Doctor's Wife Should Know, Mrs. D. W. Harmon and Mrs. I. U. Parsons; violin selection by Miss Christy; Talks on the World's Fair, Mrs. Ward A. DeYoung and Mrs. George M. Agan; and readings by Miss Gidley.

Polk County

The annual meeting of the Polk County Auxiliary was held in Des Moines, June seventh, at the home of Mrs. Oliver J. Fay. Those attending the tea had a pleasant afternoon together with a short business meeting called by the president, Mrs. T. A. Burcham. Mrs. Ralph Parker was elected president for the coming year. The talented young son of Dr. Julius Weingart, who has just returned from a year's study in Europe, gave a delightful program of violin music. A guest of the afternoon was the State President, Mrs. William A. Seidler of Jamaica.

SOCIETY PROCEEDINGS

Black Hawk County

Walter C. Alvarez, M.D., of the Mayo Clinic, Rochester, addressed members and guests of the Black Hawk County Medical Society, Thursday, June 8, on The Doctor and His Family. Included among the guests of the society at its lodge, were several state society officers, and physicians who attended the recent postgraduate course held in Waterloo.

Clinton County

Thursday, June 1, the Clinton County Medical Society held its regular meeting at the Lafayette Hotel. F. R. Peterson, M.D., of Iowa City, spoke on Diseases of the Spleen. Following the paper a buffet luncheon was served and a social evening was enjoyed. There will be no meetings during July and August, but the annual picnic will be held Thursday, September 7.

Ralph F. Luse, M.D., Secretary.

Dubuque County

The Dubuque County Medical Society entertained members of the Dubuque Druggists Association at Leiser's Gardens, Tuesday, June 20. A feature of the program was a ball game, which was easily won by the "medics," 14 to 9. Fried chicken, with all the trimmings, satisfied all appetites.

Roy I. Theisen, M.D., Secretary.

Floyd County

The regular monthly meeting of the Floyd County Medical Society was held Wednesday evening, May 31, at the Hotel Hildreth, Charles City. Following dinner the evening was devoted to a very instructive discussion of The Causes of the Vomiting of Blood, by A. B. Rivers, M.D., of the Mayo Clinic, Rochester. The lecture was followed by a general discussion.

J. B. Miner, Jr., M.D., Secretary.

Harrison County

Thursday, June 22, the medical profession of Harrison County held its annual picnic at the Golf Club House in Dunlap. Several members of the Monona County Medical Society were present as guests. A bountiful picnic lunch was served after which Emil C. Junger, M.D., of Soldier, presented the afternoon address. The meeting was honored by the presence of Drs. Johnson, O'Keefe, Bellinger, Hill and Hennessy from Council Bluffs, and Dr. Robert L. Parker of Des Moines, all of whom spoke to the group briefly.

F. H. Hanson, M.D., Secretary.

Henry County

The Henry County Medical Society held an afternoon and evening meeting at the New London Country Club, Tuesday, June 13, celebrating the thirtieth anniversary of the society, and honoring Dr. O. A. Geeseka, who is observing his fifty-fifth year in medical practice. After the dinner, a review of the thirty years' existence of the Henry County Medical Society was given by Dr. W. S. Lessenger of Mt. Pleasant. He, with Dr. Geeseka, Dr. W. A. Sternberg, Mt. Pleasant, and Dr. Van Ausdall of New London, are the present living members of the society which was organized in 1903.

Johnson County

W. F. Boiler, M.D., of Iowa City, and Granville A. Bennett, M.D., of the Department of Pathology, Harvard Medical School, addressed the Johnson County Medical Society, at its regular monthly meeting Wednesday, June 7. Dr. Boiler spoke on the Treatment of Acute Otitis Media, and Dr. Bennett presented a paper, illustrated with one hundred lantern slides, on Degenerative Changes in Joints Resulting from Continued Trauma and Increasing Age,

and Their Relationship to Hypertrophic Arthritis. Both papers were enthusiastically received.

Horace M. Korns, M.D., Secretary.

Louisa County

The Louisa County Medical Society met at Oakville, Thursday, June 8, for a dinner meeting at which L. E. Weber, M.D., of Wapello, read a paper on Laboratory Technic, and O. A. Kabrick, M.D., of Grandview, talked on The Use of Drugs in Disease.

E. R. King, M.D., Secretary.

Madison County

Dr. and Mrs. Leslie Lamb entertained the members of the Madison County Medical Society, and other guests, at a seven o'clock dinner at their home in Lorimor, Monday evening, June 12. For the scientific program, Dr. Lamb presented C. A. Henry, M.D., of Farson, who spoke on the final report of the committee on the costs of medical care, his subject being, Who Killed Cock Robin? Charles B. Taylor, M.D., of Ottumwa, president of the Iowa State Medical Society, was present and gave an interesting talk on Your Society.

C. B. Hiekenlooper, M.D., Secretary.

Marshall County

Members of the Marshall County Medical Society heard a complete description of the ailments of the kidneys and the best known types of treatment, when Daniel J. Glomset, M.D., of Des Moines, addressed that group, Tuesday, June 6, at the Hotel Tallcorn in Marshalltown. The organization will not meet again until September.

Mills County

Thursday, June 22, the Mills County Medical Society met at the State Institution in Glenwood and the following program was presented: Report of the State Medical Meeting, I. U. Parsons, M.D., of Malvern, and a Case Report by Ward A. DeYoung, M.D., of Glenwood, with a discussion by George M. Agan, M.D., also of Glenwood. A symposium on diseases transmitted by animals to man was then presented by veterinarians of the county as follows: Bangs Disease, Thomas W. Gidley, discussion by L. C. Blank; Tuberculosis, J. W. Baer, discussion by R. L. South; Anthrax, C. O. Johnson, discussion by T. W. Gidley; Glanders, B. F. Ward, discussion by C. O. Johnson; Rabies, R. L. South, discussion by J. W. Baer, and Tularemia, L. C. Blank, discussion by B. F. Ward.

J. M. Donelan, M.D., Secretary.

Scott County

The Scott County Medical Society met Tuesday, June 6, for a dinner meeting at the Lend-a-Hand Club in Davenport. Joseph B. VanderVeer, M.D., of the Pennsylvania Hospital was the speaker of the evening, taking as his subject, The Electrocardiogram as an Aid to the Diagnosis and Treatment of Heart Affections.

Henry A. Meyers, M.D., Secretary.

Tama County

Members of the Tama County Medical Society, their wives, and guests including state society officers, joined in paying tribute to the two oldest practicing physicians in Tama County, Friday, June 9, at Gladbrook. Dr. A. F. Walter has practiced medicine at Gladbrook for fifty-three years, and Dr. H. J. von Lackum has practiced in Dysart for forty-seven years. Gifts were presented to these two physicians by the county society, Dr. A. A. Pace of Toledo making the presentation. Speakers on the after-dinner program included: Dr. Charles B. Taylor of Ottumwa, Dr. Robert L. Parker of Des Moines, Dr. C. W. Ellyson of Waterloo, Dr. N. M. Whitehill of Boone, and Dr. S. A. Spilman of Ottumwa.

Taylor County

Andrew J. Smith, M.D., dermatologist of St. Joseph, conducted a skin clinic at a meeting of the Taylor County Medical Society held Tuesday, May 9, at the home of Dr. and Mrs. L. T. Reed in Gravity. Another feature of the evening program was a talk on Conditions Affecting the Eye, Ear, Nose and Throat, by Willard C. Proud, M.D., also of St. Joseph.

Van Buren County

The Van Buren County Medical Society held its regular meeting at the Lacey-Keosauqua State Park, Thursday, June 3, for the annual picnic dinner. Principal speakers on the afternoon program included Robert M. Lapsley, M.D., of Keokuk, and Charles Tierney, M.D., of the Citizens Conservation Corps of Keosauqua.

Des Moines Valley Medical Society

The sixtieth annual meeting of the Des Moines Valley Medical Society was held in Ottumwa, Tuesday, June 20. The morning session convened at the Ottumwa hospital, while the afternoon session was held at the St. Joseph Hospital, with a noon luncheon being served at the Methodist Church. Speakers on the program included: Walter D. Abbott, M.D., of Des Moines, Head Injuries; George B. Crow, M.D., of Burlington, Heart Diseases; Peter A. Bendixen, M.D., of Davenport, Fractures, with a demonstration of cases; Harry C. Willett, M.D., of Des Moines, Lesions of the Lips, and E. D. Plass, M.D., of Iowa City, who presented a statistical review of births in Iowa. Officers of the association are: Dr. Ira N. Crow of Fairfield, president, and Dr. Edward B. Hoeven of Ottumwa, secretary.

Southwest Iowa Postgraduate Medical Society

The regular meeting of the Southwest Iowa Postgraduate Medical Society was held Thursday, June 1, in Red Oak, and the following program was presented after the six-thirty banquet: The Advantages and Disadvantages of Transurethral Prostatic Resection as Compared with Prostatectomy, Edwin Davis, M.D., of Omaha, Nebraska; and Mistakes in Diagnosis and Why We Make Them, A. A. Johnson,

M.D., Council Bluffs. Officers of the society are Dr. R. L. Barnett of Atlantic, president, and Dr. R. M. Sorensen of Cumberland, secretary.

Upper Des Moines Medical Society

The summer meeting of the Upper Des Moines Medical Society was held at the Inn, Lake Okoboji, Thursday, June 29, and an afternoon program was presented as follows: Coronary Arterial Disease, Frederick A. Willius, M.D., of the Mayo Clinic, Rochester; Carcinoma of the Urinary Bladder, H. W. Scott, M.D., of Fort Dodge; Why People Break Down, Walter C. Alvarez, M.D., of the Mayo Clinic, Rochester; Diagnosis and Management of Head Injuries in General Practice, Anatole Kolodny, M.D., of Sioux City; Fracture of the Upper Extremity, F. R. Peterson, M.D., of Iowa City. A dinner was held at six-thirty, with Dr. Frank P. Winkler of Sibley officiating as toastmaster. He introduced Dr. Oliver J. Fay of Des Moines, who was the speaker of the evening.

INTERESTING NEWS

In Brief

Crushable capsules of chloroform for use in childbirth to alleviate pain are being tried extensively in England.

Investigations suggest that the adrenal cortical extract, possibly cortin itself, helps the body to utilize Vitamins B and C.

A second cortical extract from the adrenal gland necessary for the production of milk, has been isolated and studied at the University of Buffalo. The new extract has been called "cortilactian."

During the year 1932, as many as 241 deaths in Iowa were attributed to appendicitis, according to death certificates filed with the Bureau of Vital Statistics of the State Department of Health.

The recently advocated methylene treatment as an antidote for cyanides and carbon monoxide gas has been proved destructive to hemoglobin, and consequently, dangerous, when used in considerable amount.

Among the 493 patients registered during the past year at the Mary Greeley Hospital at Ames, the death rate was only 1.6 per cent. The hospital is a general hospital, accepting surgical, medical and obstetrical cases.

Observations made in the Columbia University Institute of Cancer indicate that the liability to cancer, as such, is not inherited, and suggest that age and irritation are the probable causes for the development of cancer.

Sioux City hospitals gave free and part pay service to 2,568 patients during 1932. The free service amounted to $58,926. In addition to this amount, physicians, surgeons, and dentists gave free service to patients totaling over $60,000.

A recent survey of the Davenport Public Schools, indicated that 18 per cent of the school children were suffering from defective vision or defective teeth. Contagious disease among school children for the year ending June 9, showed a marked decline.

By an agreement between the hospitals and the county board of supervisors, indigent patients in Clinton County will be received at the Jane Lamb Memorial and the St. Joseph's Mercy hospitals in Clinton, Iowa, for treatment during the next fiscal year.

Employing sound amplification equipment, Dr. Scott N. Reger of the University of Iowa hospital staff, predicts the possibility of teaching speech to the exceedingly hard of hearing. The apparatus is suitable for group instruction as well as individual instruction.

The ninety-three men and women who received their doctor of medicine degrees from the University of Iowa last month, will complete their internships in sixteen different states. Eleven of the ninety-three will serve their interneships at the State University Hospital.

Observers at McGill University state that researches are under way to segregate the various hormones of the pituitary body, of which there are now estimated twenty-two kinds. The hormone regulating thyroid activity has already been isolated and is being subjected to critical study.

Dr. Augustus G. Pohlman, dean of the medical school at the University of South Dakota, has been appointed professor and head of the department of anatomy in the Creighton University Medical School, Omaha. Dr. Pohlman will succeed the late Dr. Herman W. Schulte, and will assume his duties on July 15.

PERSONAL MENTION

Dr. F. P. McNamara of the Finley Hospital, Dubuque, was awarded a silver medal for his scientific exhibit at the annual session of the American Medical Association held recently in Milwaukee. Dr. McNamara received the reward for excellence in the presentation of an exhibit illustrating the activities of the pathologic laboratory in a hundred-bed hospital.

Dr. M. E. Barnes of Iowa City, addressed the students of the Davenport High School, Thursday, May 25, on "The Health of the School Child." Dr. Barnes appeared under the auspices of the Scott County Teachers' Association.

Dr. Sydney Jones, who has been practicing medicine at Stratford for a number of years, has entered the government service, and is now located in the Rosebud Reservation, at Wood, South Dakota.

Dr. James K. Stepp of Jesup, has been recently appointed to the State Fish and Game Commission by Governor Clyde L. Herring.

Dr. F. L. Wahrer of Marshalltown, presented a paper before the midwestern section of the American Congress of Physical Therapy, held recently in Peoria, Illinois. Dr. Wahrer's subject was "Electrosurgery."

Dr. Frederick H. Lamb of Davenport was elected president of the American Society of Clinical Pathologists, at the annual convention of that organization held in Milwaukee, in connection with the annual meeting of the American Medical Association.

Dr. B. P. Nolan, a recent graduate of Creighton University Medical School, has announced his association with Dr. Donald L. Raffington at Creston. Dr. Nolan comes to Creston directly from Ashville, North Carolina, where he has been connected with a government hospital.

Dr. Royal F. French of Marshalltown, addressed the medical staff of Mercy Hospital in Iowa City, Thursday, May 18, giving an illustrated lecture of his recent trip to India.

Dr. G. W. Gilfillan, formerly of Pulaski, has opened offices in Bloomfield, and will occupy the rooms used by the late Dr. R. D. Toben.

Dr. Evon Walker of Ottumwa, spoke before the local Kiwanis Club, Monday, June 19, at the Ottumwa Country Club. Dr. Walker discussed "The Human Heart."

Dr. Raymond Gregory, who has been located at Hawarden for almost three years, is leaving to accept a position as resident doctor in the department of internal medicine at the University Hospital in Iowa City.

Dr. Charles S. Hickman of Centerville has recently received word that he has been accepted by the board of regents as a fellow in the American College of Surgeons.

Dr. Paul A. White of Davenport, was re-elected president of the Tri-City Alumni group of University of Chicago graduates, at a meeting held May 28 in Davenport.

Dr. D. E. Graham, eye, ear, nose and throat specialist of Ottumwa, has announced the association of Dr. D. O. Bovenmyer with him for the practice of medicine. Dr. Bovenmyer was graduated from the State University of Iowa College of Medicine in 1926 and comes to Ottumwa directly from Beatrice, Nebraska, where for the past two years he has headed the eye, ear, nose and throat department of the Hepperlen Clinic.

Dr. A. I. Haugen of Ames, spoke on "Health Questions After Forty," before the local Kiwanis Club, Friday, June 9.

Dr. L. A. Gaukel has located in Onawa for the practice of medicine and surgery. Dr. Gaukel is a graduate of Creighton University Medical School, and has just completed his interneship at Mercy Hospital in Council Bluffs.

Iowa physicians engaged in reforestation work include: Drs. E. J. Tierney of Sioux City; P. J. Gustin of Bedford; F. D. Edington of Strawberry Point; R. M. Sorensen of Cumberland; J. L. Keane of Dyersville; H. E. O'Neal of Tipton; T. J. Greteman of Cresco; George Steinle of Burlington, and P. E. Newport of Clarinda.

MARRIAGES

The wedding of Miss Frances Stessman, daughter of Mr. and Mrs. Theodore Stessman of Panama, to Dr. Francis X. Tamisiea, son of Dr. and Mrs. J. L. Tamisiea of Missouri Valley, took place Monday, June 5, at Panama. A reception for the immediate family was held at the home of the bride's parents, after which the young couple left for a short honeymoon at Yellowstone Park, and Denver, Colorado. They will be at home after July 1st, in Missouri Valley, where Dr. Tamisiea is associated in the practice of medicine with his father and uncle.

DEATH NOTICES

Martin, Worley George, of Rippey, aged fifty-seven, died suddenly, June 6, after an acute attack of heart disease. He was graduated in 1909 from the State University of Iowa College of Medicine, and had been a member of the Greene County Medical Society in past years.

Merritt, William H., of Pleasantville, aged eighty-one, died May 31, after an illness of more than eight months' duration. He was graduated in 1877 from the College of Physicians and Surgeons, Keokuk, and at the time of his death was a life member of the Marion County and Iowa State Medical Societies.

Clark, Charles Bryant, of Cedar Rapids, aged sixty-two, died suddenly June 24, as the result of a subarachnoid hemorrhage. He was graduated in 1893 from the State University of Iowa College of Medicine, and at the time of his death was a life member of the Linn County and Iowa State Medical Societies.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. HENRY B. YOUNG, Burlington
DR. TOM. B. THROCKMORTON, Des Moines
DR. FRANK M. FULLER, Keokuk
DR. WALTER L. BIERRING, Des Moines
DR. JOHN T. MCCLINTOCK, Iowa City

ANALGESIA

A Substitute for Anesthesia in the Minor Surgical Operations

An inaugural thesis for the degree of Doctor of Medicine, by Henry Byrd Young, M.A., Chicago Medical College, Class of Eighteen Seventy-five

Editor's Note:—It is interesting to note that the writing of this thesis antedated the discovery of cocaine by nine years. The original, in long hand, is on file in the library of Northwestern University Medical School, Chicago.

This term, first introduced about the beginning of the present century, by Beau—from *a* (alpha) privative, and *algaesis* (pain), can be defined as a state in which the sensibility to pain is wanting. It is contra-distinguished from anesthesia (from *a* privative and *aisthaesis,* feeling; consequently a lack of feeling) by this, that it is constituted by a lack of the painful sensations only, while anesthesia, in a broader sense, is a lack of all the sensibilities, painful, special or otherwise,—such as heat, cold, tickling, the muscular sense, etc. etc. And this anesthesia from whatever cause,—ether, chloroform, nitrous oxide, amylin, or refrigeration by the different sprays. Hence as it is claimed by Beau, anesthesia includes analgesia; in other words, is impossible without analgesia.

The converse of this, namely: That analgesia is not impossible without anesthesia, which Beau also claims to be true,—together with its practical utility, if it should be true, is the subject for consideration.

Without entering into the details as to the desirability of such a conclusion, and the advantages of such a practical utility,—for to anyone who will take but a moment's thought upon the subject it will be at once apparent that not only do we avoid that dread of unnatural sleep which is almost universal, but we can have that which is often invaluable in surgical operations, viz.: The conscious assistance of the patient.

Without going into any of these details then, we come at once to the question: Is analgesia possible without anesthesia?

For an intelligent answer to this question we must investigate two kinds of evidence, that of existing pathological conditions, and that of physiological experiments. And, first, let us examine the evidence of pathological conditions.

Beau, in the Archiv. Gen. de Med. (January, 1848) mentions that he found true analgesia, simply a loss of painful sensations, in thirty cases of lead poisoning, under his care. Weber, in his Handworterbuch der Physiologie, says: "In Hemoplegia not all the nerve fibres are destroyed in their functions, some are left; but they are not competent to transmit all the sensations." And quotes the following case: "G., aet. 68 years, hemiplegia. Has paralysis of the left arm and foot; of the pectoralis major, and fibres are destroyed in their functions, some are left; but they are not competent to transmit all the sensations." And quotes the following case: "G., age 68 years, hemiplegia. Has paralysis of the left arm and foot; of the pectoralis major, and latissimus dorsi muscles. Muscles of the trunk and head not affected. Sensibilities are dulled, and even abolished, in the affected parts. Reflex action, however, is induced by pricking, and titillating some parts of the foot. Median line generally sensitive, but there are many spots analgesic. Can distinguish temperatures to a very limited extent, though some parts are entirely anesthesic." In his article on Tastsinne and Gemeinge fuhl, the same author cites the very interesting case of Vieusseux of Geneva, a case of complex paralysis. "The left side of the body, and right side of the head, was analgesic. On the right side of the body sensibilities were dulled, and muscular action impaired.

He could count his pulse with his left hand; but pinching and pricking were felt only as contact. What is rather unusual in such cases, on the analgesic side there was also perversion of sensibility as to temperature—warm water felt cold, and cold water warm."

Dr. Brown-Sequard, in his excellent work on the Physiology and Pathology of the Central Nervous System, after speaking at length to show that a loss of sensibility does not depend on any alteration of the posterior columns, but on alterations in the central gray matter, says: "It remains to examine if there is some difference between the various kinds of impressions as regards their place of passage in the spinal cord." Then, upon the hypothesis that the conductors of these impressions are distinct from one another, as touch, tickling, pain, heat, cold and the sensations accompanying muscular contractions, makes the following analysis of cases seeming to show these differences:

(1) Loss of tactile sensibility, pinching, pricking, and passage of strong galvanic current (and, therefore, loss of muscular sensibility). Persistence of feeling of cold, and tickling. Illustrated by the following case: "A young man had symptoms of myelitis; and, shortly after, he became completely paraplegic, and lost the faculty of feeling contact of foreign bodies, unless there was pressure, when he could usually tell the place where he was touched. He did not feel when pinched or pricked, nor when the galvanic current was applied to the skin. But touch of cold metal, or the least tickling was immediately felt. Spasms in the muscles were not felt. Finally tickling was no longer felt.

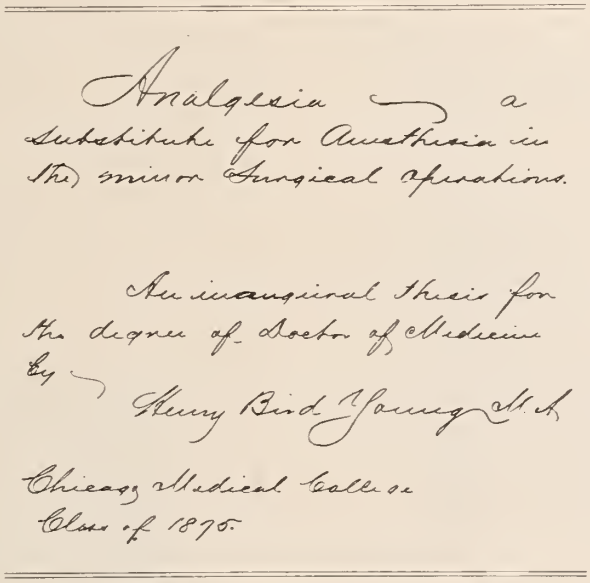
(2) Loss of feeling, tickling or contact. Persistence of pain. Illustrated by the following case: "A man admitted into St. Antoine, completely paralytic. Sensibility to pricking, lost, at first; but afterward completely restored. Tickling soles of feet not felt, but reflex action induced. Touch not felt from feet to middle of thighs."

(3) Loss of tactile sensibilty, and increase of pain.

(4) No sensation of heat, but tactile sensation not impaired. Illustrated by a case of Dr. Budd—patient injured in cervical region, with recovery.

(5) Loss of pain and pinching; diminished sense of cold, heat, and touch. (Case of fracture of the 7th cervical.)

Autopsies of some of the foregoing cases, as well as many others of equal interest (for cases of this kind generally prove fatal, sooner or later) have revealed lesions of the spinal cord in different sections. These lesions have given rise to suggestions, and on the principle announced by Bernard, that by means of curari, and in other ways, we could induce in the healthy organism phenomena similar to those in diseased, many physiological experiments have been performed.


Analgesia — a
substitute for Anesthesia in
the) minor Surgical operations.

An inaugural thesis for
the degree of Doctor of Medicine
by
Henry Bird Young M.D.
Chicago Medical College
Class of 1875.

Facsimile of title page of Dr. Young's thesis

The evidence of some of these physiological experiments we may now investigate.

Schiff found, on making section of the spinal cord, cutting all but the posterior columns, that the tactile sense was alone preserved; all others being destroyed. A dog pinched on a part supplied by nerves from below the section appeared to notice only mere tact, and looked around innocently. (In passing I might remark that this case is of interest only in a physiological light, as an aid for diagnosis in disease, and of no practical benefit as regards the production of analgesia, as we wish it temporarily—section of the cord, in the first place, causing a permanent analgesia; and, in the second place, applied to the human species, never justifiable.

We will now look over a few experimental cases that seem to have a more practical bearing.

Gerdy, in his own anesthesia, found that painful sensations were abolished long before the special sensations; also, tact and titillation. He could feel a sense of numbness gradually coming on from the extremities toward the trunk; and when pinched, or pricked with a sharp instrument, recognized only the contact.

Longet, referring to experiments of Malgaigne and Velpeau, says: "Sometimes patients under the influence of ether have true analgesia; sometimes also, the tactile sense is lost, but not the special senses."

Perigoff operated, under ether, for vesico-rectal fistula, with unimpaired consciousness of patient and without pain.

Dr. Hotz of this city (Chicago) relates a case in his own practice in which, after the administration of chloroform, the patient remained perfectly conscious, but seemed to have lost all sense of pain; so that during the course of the operation (removal of cataract) he was able to render valuable aid, as he did, to the operator.

Querineau, of Paris, amputated the thigh of a man, aet. 34 years, after putting him into hypnotism, by causing him to look steadily for about ten minutes at a bright spatula. The man witnessed the whole operation, but felt no pain whatever.

Rabuteau, in the *Journal de L'Anatomie et de Physiologie,* speaking of the simultaneous action of chloroform and the alkaloids of opium, says: "The alkaloids of opium prolong, for the most part, the anodyne action of chloroform; though they are not all soporifics, yet they almost all possess the property of diminishing sensibility." Nussbaum was the first to make this discovery with the acetate of morphia; but the same result has since been arrived at with narceia. "A dog inoculated with 5 c.c. of chloro-hydrate of this base, and was then put to sleep by chloroform, knew nothing (of sensations) on awaking. He could walk about, and recognized when he was called, but he could be pinched, pricked, and his feet stepped on without any manifestation of pain on his part. This extraordinary state continued for some hours." He further says:

"Relying on these data, I have thought that insensibility might be obtained by causing to be swallowed a chloroform and opiate solution, which agents given separately would not produce it. Then the inhalation of chloroform would not be indispensible, and the dangers of anesthetic sleep would be avoided. From experiments made on animals, by injecting chloroform per rectum, after inoculation with narceia, or morphia, I have verified my supposition."

From The Doctor (London publication, August 1, 1873), we have the following: "Dr. Horvath of Kieff lately proposed in the Centralblat fur die Medicinishin Wischenschaften a new method of producing local anesthesia: If the hand be immersed for a short time in ice water severe pain is caused. But in experiments on frogs, by means of cold alcohol, he found that no such pain was produced when the hand was so immersed; not even when the temperature was as low as 5° C. Glycerin was found to possess the same property. Ether caused pain, and mercury still more acute pain, causing speedy withdrawal of the fingers at 3° C. It was next ascertained that when the finger was immersed in alcohol at 5° C. no pain was experienced. Moreover though the faintest touch was directly perceived by the finger it was insensible to sharp pricks. This seemed to show that the sense of pain might be lost without impairing the tactile sense; which is known to reside in the superficial integument. This apparent possibility seemed important from a physiological point of view; also of no small practical utility in allaying certain sorts of local pain, such as burns, etc., etc.

Dr. Horvath had an opportunity of trying it in a case of burns (on his own person) and found it not only successful in allaying pain, but it assisted in keeping the wound healthy, and stimulated granulation.

Other cases of interest might be cited, but these I think comprise all the essential points now known. At least they are sufficient for the conclusions which I have to deduce.

These conclusions are:

(1) From the evidence of both pathological cases and physiological experiment it is apparent that the different sensibilities are separable; that is that pain, heat, cold, etc., are distinct from one another, and any one of them can be exalted, diminished, or entirely lost without necessary impairment of the others. (Whether this can be accounted for on the theory which Brown-Sequard and others advance, that these sensibilities each have different channels of passage through the spinal cord, a question of great interest to physiologists, practically doesn't matter. The fact is sufficient.)

(2) We conclude that analgesia is possible without anesthesia, as it is known to have existed in many pathological cases—cases of injury, and organic disease of the nervous system. Then on Bernard's theory, already given, reasoning by analogy, we might conclude that analgesia was possible by artificial means. But this is unnecessary, as we already have proofs of this in many cases, especially those of Querineau, Rabuteau and Horvath.

(3) From these cases of Querineau, Rabuteau and Horvath we may conclude that analgesia is also of practical utility, or may be made so. Not so much, perhaps, by the Querineau method, for though mesmerism frequently produces this state, it is not applicable in all cases. Horvath's trial of cold alcohol, however, is worthy of attention, and Rabuteau's experiments with chloroform and morphia are certainly valuable. The certainty of success with the former would greatly assist us in surgical operation on the extremities, and the operations of minor surgery, while success with the latter might include the capital operations of surgery. And no one will deny that the inducements warrant a thorough trial of both.

The History of Medicine in Lucas County

Tom Morford Throckmorton, A.M., M.D.,
Chariton

Tom Bentley Throckmorton, B.Sc., M.D.,
Des Moines

(Continued from last month)

Physicians who have practiced in Chariton

Dr. Harmon Heed

Dr. Harmon Heed was born in Yardlyville, Bucks County, Pennsylvania, April 6, 1840. He was a graduate of the medical department of the University of Pennsylvania, in Philadelphia. He enlisted as Assistant Surgeon in the 40th New Jersey Volunteers at Trenton, New Jersey, and was honorably discharged from the army at the close of the Civil War.

He came to Chariton in October, 1865, where he was associated for a time with Dr. William H. Gibbon. Later he entered into partnership with Dr. W. J. Baird under the name of Drs. Heed and



Harmon Heed, M.D.
1840-1888

Baird. They opened an office in the new Mallory Opera Block on the northwest corner of the town square, where they occupied rooms which were fitted up many years ahead of the time. Dr. Heed was a very successful physician. He was local surgeon for the Burlington railroad. He was also a member of Chariton Lodge No. 63, A. F. and A. M. He married Miss Sue Anderson, a school teacher, in Chariton, May 7, 1868. In 1875 Dr. Heed moved to Amherst, Massachusetts. He died in that city May 18, 1888, at the age of forty-eight years.

Dr. William H. Wilson

Dr. William H. Wilson was a native of Allegheny County, Pennsylvania. He came to Lucas County in the early sixties. He had attended one course of lectures at the Homeopathic Cleveland



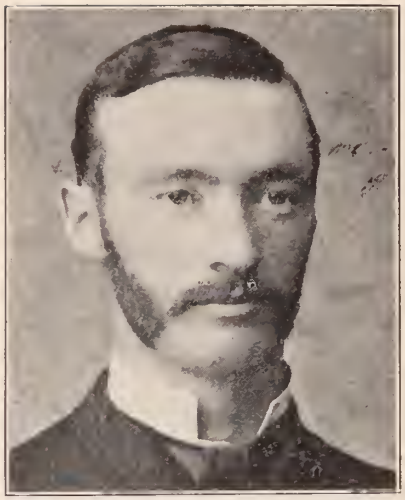
William H. Wilson, M.D.
*-1890

Medical College, in Ohio, in 1860. Later he was graduated from the Homeopathic College of Physicians and Surgeons in St. Louis, Missouri, in 1870. He was the first homeopathic physician to locate in Chariton; consequently he experienced the opposition and ridicule of many of the so-called "regulars," some of whom stooped so low as to speak of him as the "little mouse-feces doctor." Nevertheless, in spite of that onerous appelation, the doctor was honest in his work and attended strictly to his own business. He took no issue with his antagonistic confreres but let them quarrel and fight among themselves. The doctor had a son whom he educated in medicine. Dr. Wilson was well supplied with surgical instruments and other essential equipment. The writer purchased a very useful set of splints from the widow some time after the death of the doctor, which occurred at his home in Chariton in 1890.

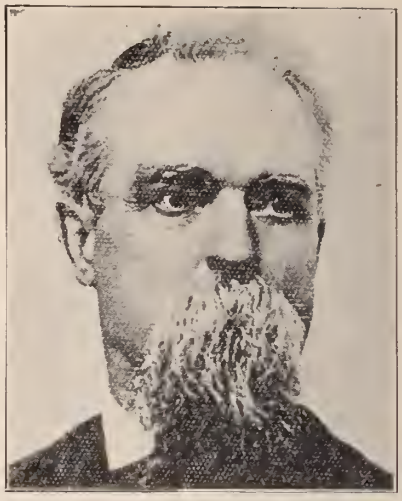
Dr. William Fletcher Wilson

Dr. William Fletcher Wilson, the son of Dr. William Wilson, was reared in Chariton. Here he

*Date of birth uncertain.



William F. Wilson, M.D.
*-1895



John W. Culley, M.D.

attended the public schools and grew to young manhood. Dr. Will, as he was called by his friends, was graduated from the Hahnemann Medical College, in Chicago, in the class of 1879. He returned to his native town and was associated in the practice of medicine with his father for two years. He then took postgraduate work in New York City for a year or two. Following its completion, he located in Denver, Colorado, as a specialist in ophthalmic and aural surgery. He was married to Miss Lorinda Babcock of that city about 1885. The writer called at his office in Denver in 1887. On learning of my presence, Dr. Wilson immediately came out and, taking me by the hand, led me into his private office. Here he asked me to tell him all about Chariton and his many old friends. His waiting room was crowded with patients and I was loathe to take up his time but, in spite of my protest about interfering with his work, he exclaimed, "Oh, let the patients go hang. They will wait or come back. Now talk." I had a most delightful conversation with him and was pleased to see the evidences of his successful practice. He died, after a day or two of illness, about 1895.

Dr. John W. Culley

Dr. John W. Culley was a graduate of the medical department of the University of Michigan, Ann Arbor, in the class of 1873. He located in Chariton about 1873 or 1874, and entered into partnership with Dr. James E. Stanton, which relationship continued for several years. He was married to a Miss Waynick of Chariton. Dr. Culley was a member of Chariton Lodge No. 64, Independent Order of Odd Fellows. He was a well educated man and a good doctor. He had rather queer ideas as to dress. It was not unusual during the winter and spring months to see the distinguished doctor arrayed in a shaggy buffalo overcoat, felt boots, and high silk hat. He left Chariton about 1900, going to Salt Lake City, Utah, where he died.

Dr. William Addison Todd

Dr. William Addison Todd was born in Danville, Indiana, April 4, 1838. His parents were Dr. Henry G. and Levina (Hunter) Todd. His father, a native of Louisville, Kentucky, was born in 1811; was educated at Lexington, Kentucky, and was graduated from the Transylvania Medical College in 1831. He practiced medicine in Danville for the long period of sixty-one years and died in that city in October, 1892. Young William was educated in the city schools of Danville, and in Wabash College at Crawfordsville. He entered that institution in 1854 and pursued a special course of study for two years. He then began the study of medicine in the office of his father who at that time was located in Indianapolis. Laying aside his medical subjects for a time, he became engaged in the drug business for several years. However, once more the call of medicine became strong and he matriculated in the medical department of the University of Michigan, where he completed one course of lectures. He then began the practice of medicine at North Salem, Indiana. In 1864 he entered the army as Assistant Surgeon of the 11th Indiana Infantry, in which capacity he served until the close of the Civil War. In the fall of 1865 he became a resident of Garden Grove, Decatur County, Iowa, where he continued to practice medicine and surgery until 1873. He then returned to Indiana where he became a student in the Indiana Medical College at Indianapolis, from

*Date of birth uncertain.

which institution he was graduated in the class of 1874. Following his graduation he returned to Garden Grove where he remained until 1882, when he came to Chariton.

Dr. Todd was married at Eddyville, Iowa, October 3, 1861, to Miss Orpha G. Tuttle, a native of New Hampshire. This union was blessed by two sons, Edward Carlton and Henry Oliver. The former died in infancy. Dr. Todd was a member of the county and state medical societies, and of the Des Moines Valley Medical Association. He served the latter as its president on one occasion. He was a member of Iseminger Post, No. 18, Grand Army of the Republic. He was also a member of Chariton Lodge No. 63, A. F. and A. M.



William A. Todd, M.D.
1838-1897

The doctor was injured in a runaway accident in the spring of 1897. He was thrown from his buggy while making a call, sustaining fractured ribs and internal injuries to his chest and lungs, which caused an effusion of fluid in his pleural cavity. These injuries were attended by marked dyspnea and great suffering. The writer waited upon him throughout his last sickness. Dr. Todd was a very kind and sympathetic man, easy to approach and was on good terms with all of his professional brethren. He stood ever ready to assist them in any way possible. He inspired confidence and trust in his patients and was dearly loved by children. The doctor was a worthy and faithful member of the Presbyterian Church. He died at his home in Chariton, March 24, 1897, at the age of fifty-eight years. The funeral services were held in the church of his faith and were largely attended. His body was interred in the Chariton cemetery.

Dr. Byron N. Gantz

Dr. Byron N. Gantz was born in 1860. He was graduated from the Hahnemann Homeopathic Medical College, Chicago, in 1885. The doctor came to Chariton about the year 1886 or 1887, but he remained only a year or two. He was practicing in Fairfield, Jefferson County, Iowa, in 1925.

(To be continued next month)

OBITUARIES

FRANK DOUGLAS DAVENPORT, M.D., 1864-1933

An Appreciation by the Madison County Medical Society.

The death of Frank Douglas Davenport, M.D., on May 22, 1933, was a real loss not only to this society but to the whole community in which he served so many years. For twenty-six years he held continuous membership in the Madison County Medical Society, and very few members have been more faithful in their attendance at meetings or more willing and ready to participate in any of its activities. At our dinners and informal meetings we shall miss his eagerness and his friendly spirit as he joined in the ordinary conversation. In our scientific programs we shall miss his readiness to participate in the discussions, and his willingness to tell of his experiences covering forty-six years of very active professional life.

When final rites were said for Dr. Davenport, not a single member of the Madison County Medical Society was absent. Many people, commenting on this, have remarked that Dr. Davenport must have been loved by his confreres.

We recommend that this expression of our regard for Dr. Davenport be spread on the minutes of the Madison County Medical Society and that a copy be sent to his son, Frank, as well as to the Journal of the Iowa State Medical Society.

Signed: Madison County Medical Society.

When the final history of the world is written, the physician will stand alone in the variety of his economic usefulness, his field apart, yet touching at all times the toga of the citizen, the robe of the priest, the periwig of the advocate, the scarlet of the judge, the mask of the executioner—each shadowing his life with the mixt bitterness of reproach at the limitations of his ability in the midst of so great a field of labor and of so large possibilities of accomplishment, while always the whisper of the succored child, the prayers of the convalescent and the glory in sharing the salvation bring the ray of light which lends the soft harmony of gentleness which should be the signal standard of the true physician, as, at the end, he stands, a sad and thoughtful actor in the Human Comedy.

Isadore Dyer, M.D.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

CHARACTER IN HUMAN RELATIONS—By Hugh Hartshorne, Ph.D., Columbia University, Research Associate in Religion, Yale University. Charles Scribner's Sons, New York and London, 1932. Price, $2.50.

DIETETICS FOR THE CLINICIAN—By Milton Arlanden Bridges, B.S., M.D., F.A.C.P., Associate in Medicine at the New York Postgraduate Medical School, Columbia University, in collaboration with Ruth Lothrop Gallup, dietitian, and a foreword by Herman O. Mosenthal, A.B., M.D., Director of Medicine at the New York Postgraduate Medical School, Columbia University. Octavo, 666 pages, price, cloth, $6.50. Lea & Febiger, Philadelphia, 1933.

DIET IN SINUS INFECTIONS AND COLDS—By Egon V. Ullmann, M.D., formerly special lecturer for biology at the Oregon State College. Recipes and Menus by Elza Mez. The Macmillan Company, New York, 1933. Price, $2.00.

THE ELEMENTS OF MEDICAL TREATMENT—By Robert Hutchison, M.D., F.R.C.P., physician to the London Hospital and to the Hospital for Sick Children. Second Edition, William Wood and Company, Baltimore, 1933. Price, $2.00.

GASTRIC ANACIDITY—Its Relations to Disease by Arthur L. Bloomfield, M.D., professor of medicine, Stanford University, San Francisco, and W. Scott Polland, M.D., instructor in medicine, Stanford University, San Francisco. The Macmillan Company, New York, 1933. Price, $2.50.

MEDICAL CLINICS OF NORTH AMERICA—(Issued serially one number every other month.) Volume xvi, No. 5. (Baltimore Number, March, 1933). Octavo of 257 pages with sixteen illustrations. Per clinic year, July, 1932, to May, 1933. W. B. Saunders Company, Philadelphia and London. Price, paper, $12.00; cloth, $16.00.

MEDICAL STATE BOARD EXAMINATIONS, an organized review of actual questions given in medical licensing examinations throughout the United States. By Harold Rypins, A.B., M.D., Secretary, New York State Board of Medical Examiners. J. B. Lippincott Company, Philadelphia, Montreal and London, 1933. Price, $4.50.

OBSTETRICS AND GYNECOLOGY, Volume I, by eighty leading specialists. Edited by Arthur Hale Curtis, M.D., Professor and Head of the Department of Obstetrics and Gynecology, Northwestern University Medical School, Chief of the Gynecologic Service, Passavant Memorial Hospital, Chicago, Illinois. Complete in three volumes and separate desk index. 3500 pages with 1664 illustrations, many in color. W. B. Saunders Company, Philadelphia and London, 1933. Price, per set, $35.00.

OPERATIVE SURGERY, VOLUME VII—By Warren Stone Bickham, M.D., and Phar.M. (Tulane), M.D., (Columbia), F.A.C.S., Former Surgeon in charge of General Surgery, Manhattan State Hospital, New York; and Calvin Mason Smyth, Jr., B.S., M.D., F.A.C.S., Assistant Professor of Surgery, Graduate School of Medicine, University of Pennsylvania. Includes general index to complete work, volumes i to vii, 849 pages with 765 illustrations. W. B. Saunders Company, Philadelphia and London, 1933. Price, cloth, $10.00.

SENILE CATARACT—METHODS OF OPERATING—By W. A. Fisher, M.D., F.A.C.S., Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College, formerly Professor of Clinical Ophthalmology, University of Illinois. 267 pages, 183 illustrations, 112 of which are colored. Published by the Chicago Eye, Ear, Nose and Throat College, Chicago, Illinois.

SURGICAL PATHOLOGY—By William Boyd, M.D., Professor of Pathology, University of Manitoba; Pathologist to the Winnipeg General Hospital, Winnipeg, Canada. Third edition, thoroughly revised, 866 pages with 477 illustrations and 13 colored plates. W. B. Saunders Company, Philadelphia and London, 1933. Price, $10.00 net.

URINE AND URINALYSIS—By Louis Gerchenfeld, Ph.M., B.Sc., P.D., professor of bacteriology and hygiene and director of the Bacteriological and Clinical Chemistry Laboratories at the Philadelphia College of Pharmacy and Science. Illustrated with 36 engravings. Lea & Febiger, Philadelphia, 1933. Price, $2.75.

WHEAT, EGG OR MILK FREE DIETS, with Recipes and Food Lists, by Ray Balyeat, M.D., F.A.C.P., Director of the Balyeat Hay Fever and Asthma Clinic, Associate Professor of Medicine and Lecturer on Diseases Due to Allergy, University of Oklahoma Medical School, assisted by Elmer M. Rusten, M.D., and Ralph Bowen, M.D., of the Balyeat Hay Fever and Asthma Clinic, Oklahoma City, Oklahoma. J. B. Lippincott Company, Philadelphia, 1933. Price, $2.50.

BOOK REVIEWS

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1932. Cloth. Price, $1.00. Pp. 104. Chicago: American Medical Association.

The Council on Pharmacy and Chemistry still carries on its work of informing the medical profession concerning the new medicinal products brought out by the various manufacturers of pharmaceuticals. This volume contains the reports on products considered and rejected by the Council during the past year. Among the reports of special interest are: Ferro-Copral, a mixture of saccharinated ferric oxide, manganese citrate and copper proteinate proposed for use in the treatment of pernicious anemia and marketed under a proprietary name with unwarranted therapeutic claims; Hepatex P.A.F., a liver preparation proposed for intravenous use and marketed under a proprietary and insufficiently descriptive name with no satisfactory evidence of the safety of its recommended intravenous use; Bi-So-Dol, an unscientific "alkalinizing" mixture offered under an uninforming proprietary name with exaggerated and unwarranted claims of therapeutic usefulness; Myodin, Subidin, and Sanguiodin, unscientific preparations of iodine marketed with unwarranted claims, and indefinite, incorrect statements of composition, under proprietary uninforming names.

Besides the reports on rejected articles, the volume contains "Preliminary" and "Special" reports of exceptional timeliness and value: The preliminary report on Thorotrast, a colloidal thorium dioxide preparation proposed for use in retrograde pyelography and for roentgen visualization of the liver and spleen by intravenous administration, is an excellent example of this class of reports. The articles on Nirvanol and Triethanolamine are also interesting and effective preliminary reports. Among the "special" reports those on Sulpharsphenamine and Mercurochrome are outstanding. Each report definitively clears up the present status of the drug concerned, the former, on the basis of a questionnaire circulated among leading syphilologists, and the latter on the basis of independent bacteriologic investigation, done by consultants of the Council.

DISEASES OF TRADESMEN

By Bernardino Ramazzini, with biographical notes translated from the French. Compiled by Herman Goodman, B.S., M.D., New York City, and bound with Silk Handlers' Disease of the Skin, by Herman Goodman, B.S., M.D. Medical Lay Press, New York City, 1933.

The medical writings of many of the earlier physicians exhibit such care of observation and faithfulness in report that they are justly recognized as "classics of medical science". Such is true of the records of Ramazzini regarding occupational diseases (originally published in 1700).

Realizing that few physicians today are in any sense familiar with the writings of Ramazzini, Dr. Goodman has prepared this very readable compilation of his work. In offering this small volume to the medical profession and to others interested in occupational diseases, the author modestly makes no claim to originality but presents it rather "in a spirit of veneration for a man with social consciousness several centuries advanced from that of his colleagues". However, all of the closing chapters on silk handlers' diseases of the skin reflect the author's own observations.

The volume will be immediately appreciated by the student of occupational diseases and by every physician interested in medical history.

LIGHT THERAPY

By Frank Hammond Krusen, M.D., Director of the Department of Physical Medicine, Temple University School of Medicine, Philadelphia, with a foreword by John A. Kolmer, M.D., Dr. P.H., Professor of Medicine. Temple University School of Medicine. Thirty-three illustrations. Paul B. Hoeber, Inc., New York, 1933. Price $3.50.

There is probably no method of treatment in medicine which has been recommended for so many ills as light therapy. Unfortunately, the misuse of this form of treatment by unscrupulous physicians in the past has in many instances created reasons for doubt regarding its efficacy. Every physician remembers some practitioner of the old school who used, or rather misused light therapy as he might have a placebo. Fortunately, the present trend of medical education and practice, views empiricism with justifiable scepticism and is willing to accept only those facts which have been proved by scientific research. To this group of physicians this book will prove of immediate and immense value since it crytallizes the present proved knowledge regarding light therapy, establishes definite limits of its usefulness, and outlines the dangers which may attend the unsatisfactory use of these agents. The author has condensed his material into the least possible compass, employing frequent charts and suitable illustrations to minimize tedious description. The book will be of great value to every practitioner employing or recommending light therapy and particularly to the student requiring an appreciation of the established field of usefulness of light therapy in the general scheme of therapeutics.

NEW AND NONOFFICIAL REMEDIES, 1933

Containing descriptions of articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1933. Cloth. Price, Postpaid, $1.50. Pp. 498; lvi. Chicago: American Medical Association.

The annual editions of this volume contain all that the busy physician needs to know concerning the newer preparations which he is daily importuned by the detail men of the pharmaceutical manufacturers to use. The remedies listed and described here have been examined and found acceptable by the Council on Pharmacy and Chemistry, the deliberative body charged by the American Medical Association with the performance of this service for the practitioner, who has not the time or means to make the determinations for himself. Among the new preparations admitted during the past year are: Trichlorethylene-Calco, an inhalation anesthetic proposed especially for use in trigeminal neuralgia; Nostal, an additional barbituric acid compound; Decholin and Decholin Sodium, bile salt preparations for use in functual insufficiency of the liver, the sodium salt being suitable for intravenous use when necessary; Biliposol, Bismo-Cymol, and Iodobismitol, bismuth compounds for use in obtaining the systemic effects of bismuth, especially in syphilis; Triphal, a gold salt proposed for use in the treatment of lupus erythematosus; a number of improved liver preparations for use in the treatment of pernicious anemia; two halibut liver oil preparations of high vitamin A and vitamin D content; and Pentnucleotide, the sodium salts of the pentose nucleotides derived from the ribonucleic acid of yeast, proposed for use in infectious conditions accompanied by a leukopenia or neutropenia.

The book contains general articles, descriptive of the classification under which the various drugs are listed. According to the preface, more or less thorough-going revisions have been made of the articles: Arsenic Compounds; Dyes, Iodin Compounds; Liver and Stomach Preparations; Radium and Radium Salts and Silver Preparations.

PRACTICAL HEMATOLOGICAL DIAGNOSIS

By O. H. Perry Pepper, M.D.,, Professor of Clinical Medicine, University of Pennsylvania, Assistant Chief of the Medical Clinic, Hospital of the University of Pennsylvania; and David L. Farley, M.D., physician to the Pennsylvania Hospital, Philadelphia, and to the Cooper Hospital, Camden, New Jersey, Associate in Medicine of the University of

Pennsylvania. Illustrated, 562 pages. W. B. Saunders Company, Philadelphia and London, 1933. Price, cloth, $6.00 net.

As one reads chapter after chapter of this excellent monograph, the impression grows and finally becomes a firm conviction, that the authors write as authorities and not as the scribes. The work is really a very thorough review of the present knowledge of hematology as well as a very fine evaluation of laboratory methods and findings. For the price of such a work ($6.00) one might have the right to see more illustrations which would aid materially in elucidating many phases of hematology, but perhaps the paucity of illustrations is made up for by the very splendid bibliography which the book contains.

The book is divided, like Gaul, into three parts. Part I deals with the morphology of the cellular elements of the blood and the methods for laboratory studies of blood dyscrasias; Part II is a discussion of abnormal blood findings in diseases of the hematopoietic system; and Part III is a discussion of the blood findings in other diseases. This is arranged alphabetically so as to be easily accessible for reference.

In a word, the volume will be found to be a very dependable and instructive reference book for laboratory workers as well as clinicians.

D. J. G.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS

General Therapeutics—Edited by Bernard Fantus, M.S., M.D., Professor of Therapeutics, University of Illinois College of Medicine, and Louis B. Kartoon, B.S., M.D., Instructor of Medicine, University of Illinois College of Medicine. Series, 1932. The Year Book Publishers, Chicago.

No single volume of the Practical Medical Series has been found of greater usefulness to the general practitioner than the volume devoted each year to the summary of the advances in general therapeutics. Much attention has been given during the year to the injection treatment of varicose veins and hemorrhoids, paralleling somewhat the injection method of hydrocele treatment. A new aqueous iodine antiseptic solution has been developed which bids fair to replace some of the older and more irritating antiseptics now employed for wound and mucous membrane disinfection. Much attention has been given to the production and use of the vitamins and especial attention has been directed to the study of the sex hormone both from the standpoint of the diagnosis of gravidity and also from the standpoint of therapeutics in ovarian and uterine disorders. Among the newer antidotes may be mentioned peroxide paste for ivy poisoning, menthyline blue in cyanide poisoning and sodium sulphite in alcohol or glycerine for tear gas burns. The volume maintains the high standard established by previous discussions of therapeutics by this author.

SURGICAL CLINICS OF NORTH AMERICA

Volume xii, Number 2. (New York Number—April, 1933). Illustrated, 274 pages. Per Clinic Year (February, 1933, to December, 1933). Price, paper, $12.00; cloth, $16.00 net. W. B. Saunders Company, 1933. Philadelphia and London.

The outstanding feature of this number is the discussion of malignancies. The articles on this subject have been prepared by a number of able men and cover malignancies in all parts of the body. Nothing particularly new in the way of treatment is suggested but some rather interesting so-called "cures" are presented.

Dr. Edwin Beer gives a rather extensive treatise on bladder tumors, their diagnosis and treatment. The causes and prevention of post-transfusion reactions is reported by Dr. R. E. Stetson. A new anethesia called "pernocton" for use in obstetrics is presented with a review of the results obtained in one hundred twenty-five cases.

F. W. F.

TEN YEARS OF OBSTETRICS AND GYNECOLOGY IN PRIVATE PRACTICE

By John L. Rothrock, A.B., M.D., F.A.C.S., formerly associate professor of obstetrics and gynecology, University of Minnesota. Octavo of 222 pages with nine illustrations. Paul B. Hoeber, Inc., publishers, 76 Fifth Avenue, New York City, 1933. Price, cloth, $3.00.

Medical literature contains many reports of obstetric and gynecologic practice as observed from both the clinical and statistical viewpoint. However, these reports are, for the most part, taken from hospital records and deal almost exclusively with the poorer classes of patients. In this monograph, the author discusses 1,750 obstetric and 1,345 gynecologic cases, all taken from his private practice composed to a great extent of patients belonging to a wealthier class than that seen in the public hospital.

The author has presented his material in sufficient detail so that the reader may appreciate the various analyses which are discussed. At the same time, he has divested his discussion of tedious theories and has mentioned only etiology and pathology as these factors bearing directly upon the subjects in discussion.

Only tried and proved methods of treatment are described. The statistical summary will be of great interest to all physicians and may be of especial use in evaluating statistics from public sources. It is of particular interest that, of the 1,750 obstetric cases reported by the author, his maternal mortality was only 3.2 per cent and his infant mortality less than .3 per cent.

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FUNCTIONS OF THE ANTERIOR LOBE OF THE HYPOPHYSIS*

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Twenty-five years ago the functions of the pituitary gland were almost entirely unrecognized. Our present knowledge, which at first developed slowly, has since 1925 accumulated at such a rate that even specialists in the subject find it difficult to remain informed of all its ramifications. For us who are clinicians, the difficulty is much greater. Superficial knowledge may lead to confusion and we are in constant danger of trying to utilize too soon the results of the laboratory, or of remaining ignorant of measures which might be beneficial to our patients. It is my purpose today to outline as adequately as time permits, some of the more recent developments of our knowledge, with special emphasis on those facts which seem to bear on clinical conditions.

Pituitary Cachexia. In experimental animals it has been found that removal of the anterior lobe of the hypophysis results in abrupt cessation of growth, weakness, emaciation, atrophy of all organs, and often in the death of the animal. This condition has been called pituitary cachexia. Its clinical analogue was not recognized until 1914, when Simmonds[1,2] described the case of a woman, thirty-eight years of age, who, following a puerperal sepsis, developed excessive muscular weakness, attacks of unconsciousness, cessation of menses and the appearance of premature senility. After her death eight years later autopsy revealed complete destruction of the anterior pituitary lobe, presumably from an embolus lodging in the single artery which supplies it. Accompanying this was found generalized atrophy of organs, including the kidneys, ovaries, pancreas and liver. Since this case was recorded many similar reports have appeared in the literature. With a varying pituitary pathology including carcinoma, tuberculosis, syphilis, cysts and embolism, the clinical symptoms have in general corresponded to Simmonds' original description. It has also appeared that the thyroid and adrenal glands become atrophied to a degree greater than the rest of the tissues.

When the anterior lobe is destroyed in childhood, dwarfism of a type originally described by Lorain and by Levy is the result. In this condition also there is general atrophy of all tissues with special atrophy of the thyroid and adrenal glands. Sex development ceases abruptly. It is somewhat surprising, however, that cachexia is a less marked feature and that complete destruction of the hypophysis in children is not inconsistent with long life and a fair degree of health.

Relation of structure to function. The experimental and clinical observations on pituitary cachexia thus establish the great importance of the anterior lobe. Great difficulty, however, has been encountered in the interpretation of clinical symptoms in demonstrable pituitary disease. This is due in part to the many functions of the gland but also to its peculiar structure. As you know, there are three kinds of cells in the anterior lobe which are distinguishable by their staining characteristics. In one, eosinophilic granules are apparent, in another, basophilic granules, while the cytoplasm of the third type displays no granules and takes no stain. This is consequently known as a cromophobe cell. It is a fair inference that these different cells, so distinct in their staining reactions, may be responsible for different physiologic functions. Actually our information concerning such a relationship is most incomplete. Eosinophile cells are said to be more numerous during youth. Basophile cells appear in great numbers after castration in either sex. Chromophobe cells undergo hyperplasia during pregnancy and lactation. Most of our meager knowledge has been gained from a study of adenomata arising from one or another of the different types of cells. Surprisingly, tumors arising from the chromophobe cells, while often giving rise to neighborhood symptoms, cause no recognizable disturbances in other organs. Eosinophile and basophile tumors on the other hand produce

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changes so fundamental that not only the structure but the character of the individual may be radically transformed. It is with these functional disturbances that our discussion will be chiefly concerned.

Relation of eosinophile cells to growth. Acromegaly and preadolescent gigantism, the two most striking clinical syndromes associated with overgrowth, are constantly associated with eosinophilic tumors of the anterior hypophysis. In the series of Bailey and Davidoff[2], eosinophile adenomata were demonstrated in 33 out of 35 operative cases of acromegaly. The clinical features of the overgrowth in these conditions are too well known to justify emphasis at this time. The experimental production of abnormal growth should be mentioned. Evans[6] was the first to extract from the hypophysis the growth principle which is so abundantly produced in the presence of eosinophile tumors. With what is now known to be an impure preparation he was able to produce gigantic rats. Putnam, Benedict and Teel[10], by giving injections of the same extract every day for a year, produced acromegaly in a dog. More recently, extracts of greater potency and purity have been prepared. With such an extract, Collip was able to produce normal growth curves in hypophysectomized rats which without the extract would remain permanently stunted.

Influence of the anterior lobe on the thyroid gland. Clinical study of acromegaly has revealed that the growth phenomena are not the only effects which may be expected. Its association with hyperthyroidism has long been observed and may be regarded as the antithesis of the thyroid atrophy seen after destruction or removal of the anterior lobe. In the 72 cases of acromegaly collected by Cushing and Davidoff[5], 32 had a basal metabolic rate of +10 or above. Oxygen consumption greater than normal was observed in 50 per cent of Boothby's cases. Hypophysectomy in acromegaly lowers the basal rate on an average of 15 to 20 per cent, the effect being noted not only in patients thyrotoxic at the time of operation but also in those with initially normal rates.

Loeb[9] has shown that with extracts of the pituitary gland it is possible to produce in guinea pigs a picture which is almost indistinguishable from exophthalmic goiter. After a few days of injection, the basal metabolic rate is increased, the animals lose weight, their thyroid glands become hyperplastic, and the iodine content of the glands is diminished. Exophthalmos has been frequently observed. Loeb had been unable to reproduce these effects in rats, and Collip, attempting to do so, finally obtained a thyroid-stimulating hormone so strong that repeated injections of 0.1 cc., produced thyrotoxicosis in the rat. Collip[1] has shown that this thyroid-stimulating or thyrotropic principle can be separated from the growth principle.

Influence of the anterior lobe on the suprarenal glands. It has already been mentioned that removal of the anterior lobe causes a profound atrophy of the adrenal glands. Hyperplasia or occasionally adenoma of the adrenal glands has been noted in acromegaly. Similar changes were seen in Evans' gigantic rats and Putnam's dog. Very recently Collip has been able to produce a pituitary extract which stimulates great hyperplasia of the suprarenal glands without overgrowth of the rest of the body and without hyperplastic changes in the thyroid.

Influence of the anterior lobe on carbohydrate metabolism. One of the most interesting of all the phenomena attributable to the anterior lobe of the hypophysis is its influence on carbohydrate metabolism. In about 25 per cent of all cases of acromegaly there is an associated diabetes, sometimes quite severe. Many other acromegalic patients who fail to show sugar in the urine have high sugar tolerance curves. The diabetes of acromegaly may be greatly improved, and in a few instances has actually disappeared, following removal of an eosinophilic tumor.

Most important experimental work has been reported by Houssay[8] and his associates. They have found that hypophysectomized dogs are extremely sensitive to insulin so that a minimal dose may induce hypoglycemic shock. More surprising is the observation that pancreatectomy in an hypophysectomized dog produces only a mild form of diabetes. Barnes[3] has recently prepared such a dog in which no glycosuria appeared after removal of the pancreas. He found, moreover, that the administration of one of several hypophyseal extracts would cause glycosuria, which disappeared when the injections were discontinued.

Influence of the anterior lobe on the mammary glands. The pituitary gland also has an important influence on the secretory activity of the mammary glands. Spontaneous lactation has been observed occasionally in acromegaly and, in at least one instance, in an acromegalic man. Putnam's dog exhibited enlargement of the mammary glands with active secretion.

Recently Riddle[11] has been able to prepare an extract which is free from the thyrotropic hormone and largely free of growth hormone, but which causes growth and secretion of the crop glands of pigeons and doves, and lactation in rabbits, guinea pigs and monkeys. Present evidence indicates that the lactation hormone of the pituitary gland is not concerned with the growth

and development of the gland but only with its secretory activity.

Relation of the anterior pituitary gland to sexual function. To earlier observers, one of the most puzzling symptoms of acromegaly was the associated atrophy of the sex organs, which was accompanied by amenorrhea and sterility in women, and loss of sexual power and desire in men. This did not seem to be consistent with many observations which indicated that the pituitary gland might possess a sex stimulating function.

It was in 1927 that Phillip Smith[13] in this country, and Zondek and Ascheim[14] in Germany, discovered that by making hypophyseal implants they could produce sexual precocity in infantile animals, both male and female. In adult animals they caused increase in the size of the follicles and of the corpora lutea with superovulation. In hypophysectomized animals they were able to increase the size of sex glands which had atrophied following the removal of the pituitary gland. It was difficult to reconcile these observations with the fact that acromegaly is associated with atrophy of sex organs until Evans[7] showed that the growth principle is antagonistic to the action of the sex stimulating hormone. He found that the effect of hypophyseal implants on sex development could be prevented by large doses of growth hormone.

It now appears that the gonadotropic hormone of the pituitary gland is essential to the development and maintenance of the sex organs both in males and females. When it is absent these structures remain infantile and if it is withdrawn in adult individuals, atrophy of the sex organs occurs. It exerts no direct influence on the uterus or on the prostate and the other accessory sex organs of the male. Apparently it is entirely separate and distinct from the hormone which stimulates lactation.

Function of the basophilic cells. According to our present information, obtained largely from the clinical study of acromegaly, the eosinophile cells of the anterior lobe are capable of elaborating a growth stimulating substance, a thyrotropic and an adrenotropic hormone, and a principle which influences carbohydrate metabolism and tends to produce diabetes. Although lactation has been seen in several non-pregnant acromegalic women, it occurs so rarely that there is some question as to the origin of the specific lactation hormone from eosinophilic cells. The source of the gonadotropic hormone is as yet unknown. Several observers have suggested that it is produced by the basophilic portions of the gland, but while the hyperplasia of basophilic cells following castration lends some support to this belief, direct evidence is almost entirely lacking.

That the basophilic cells have important and perhaps different functions from those already discussed is indicated by the syndrome of pituitary basophilism recently described by Cushing[4]. From his own experience and from the literature he was able to collect several cases in which hypertension, hirsutism and obesity were prominent features. Some of these had been previously reported as examples of suprarenal disease. The obesity found in his cases was of a most curious character, being localized to the face, neck and trunk, with slight involvement of the extremities. Large red striae resembling those of a recent pregnancy were found on the wall of the abdomen. In some cases purpuric spots appeared in the skin. Kyphosis, with decalcification of the spine and other parts of the skeleton, was also described. In these cases, which when assembled seemed to form a new clinical syndrome, basophile adenoma, a great pathologic rarity, was found so frequently that there seemed to be no possibility of coincidence in the association. Although the conception of this syndrome is too new to permit any prediction of its consequences, it suggests the possibility that the anterior lobe of the pituitary gland may elaborate other hormones, as yet unrecognized, which influence blood pressure, hair growth and the accumulation of fat.

The syndrome of pituitary basophilism at first glance seems entirely different from acromegaly. There is no tendency to gigantism and no overgrowth of bones. In fact the bones tend to become fragile and decalcified. Obesity occurs as an early manifestation and is of a character and distribution not found in any stage of acromegaly. Hypertension and hypertrichosis form no part of the clinical picture of acromegaly. It is puzzling, however, to find that 50 per cent of the cases of pituitary basophilism thus far reported have been diabetic and that hyperplasia of the adrenal glands has been a prominent feature; also that there is an accompanying atrophy of the sex organs, with amenorrhea in women and impotence in men. Such observations prevent us at the present time from attempting any sharp differentiation between the functions of the eosinophilic and the basophilic cells.

SUMMARY AND CONCLUSIONS

It is now known that the anterior lobe of the hypophysis elaborates substances which have an important influence on growth, on the development and function of the thyroid and suprarenal glands, on the phenomenon of lactation, on carbohydrate metabolism and on the development of the sex organs both in men and in women. Present evidence indicates that these various effects

are under the control of separate hormones which may be isolated in a state of comparative purity by special methods of extraction. Growth, thyrotropic, adrenotropic, lactation and gonadotropic hormones are now being used with predictable effects in several laboratories in this country and abroad. The hormone which influences carbohydrate metabolism has not as yet been isolated, and may possibly be present in one or several of the already existing fractions. There is much evidence greatly strengthened by the recent study of Cushing's syndrome of pituitary basophilism, that other, as yet unrecognized, principles will be found in the anterior lobe.

It seems inevitable that in a relatively short time many of these potent extracts will be available for clinical use. While the indiscriminate use of many of the endocrine preparations of the past has been futile, it is probable that these newer and more carefully studied products, if employed with meticulous observation of effects, will furnish an unusual opportunity for clinical study and may result in benefit to many patients.

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MILD AND ATYPICAL CASES OF EXOPHTHALMIC GOITER*

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The diagnosis of hyperthyroidism in cases of adenomatous goiter with hyperthyroidism is more difficult in a great percentage of cases than is the diagnosis of exophthalmic goiter. This is explained, first, by the fact that although the hyperthyroidism associated with adenomatous goiter is more persistent, it is on the whole less severe than that of exophthalmic goiter. In 32 per cent of cases of adenomatous goiter with hyperthyroidism the basal metabolic rate is between plus 10 and plus 20 per cent, whereas in exophthalmic goiter the rates usually are much higher, only 5 per cent of them being within this range.[1] Second, in exophthalmic goiter, when it occurs characteristically, certain signs and symptoms are present which are not the result of hyperthyroidism only but which help to establish the diagnosis. These signs and symptoms which are characteristic of exophthalmic goiter and which are not present in adenomatous goiter with hyperthyroidism, are the definite ocular signs, particularly exophthalmos, a tendency to the development of crises, often with vomiting or diarrhea, and a peculiar nervous irritability out of proportion to the degree of hyperthyroidism present. At various times H. S. Plummer has described in detail the distinction between exophthalmic goiter and adenomatous goiter with hyperthyroidism. Nevertheless, the diagnosis of mild and atypical cases of exophthalmic goiter, particularly in the absence of definite ocular signs, is still associated with certain practical difficulties which usually are not present in the diagnosis of adenomatous goiter with hyperthyroidism. Unless exophthalmic goiter is associated with adenomatous goiter, the enlargement of the thyroid gland early in the course of the disease is only slight, and there may be nothing in its contour or consistency to distinguish it from the enlargement of the thyroid gland so frequently found in examination of many normal persons. Under such circumstances, one is not warranted in advising thyroidectomy unless the presence of toxic symptoms can be definitely established. Such a problem does not ordinarily exist in the diagnosis of adenomatous goiter with hyperthyroidism, for nodular goiters of any considerable size, because of their potential dangers, are considered to present surgical problems regardless of the presence of toxic symptoms. The potential dangers are hyperthyroidism, malignancy, or pressure on surrounding structures. Furthermore, in exophthalmic goiter there is usually no nodular tumor of the thyroid gland to direct attention to the gland as the possible source of constitutional symptoms. Therefore, the diagnosis of mild and atypical cases of exophthalmic goiter is the most important and time-consuming problem in connection with diagnosis of diseases of the thyroid gland. In this consideration, I shall often use the term "hyperthyroidism" inasmuch as the symptoms of exophthalmic goiter are those of

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hyperthyroidism except for a few symptoms which are characteristic of exophthalmic goiter and which distinguish exophthalmic goiter from adenomatous goiter with hyperthyroidism.

Cases of exophthalmic goiter in which the diagnosis is difficult form several rather distinct groups. The largest group, by far, is formed by those cases which must be distinguished from the functional disturbances: anxiety neurosis, neurasthenia, circulatory asthenia, and so forth. In referring to these disturbances I shall use the general term "neurosis."

Fear can produce palpitation, tachycardia, a feeling of nervousness, emotionalism, a sensation of weakness and exhaustion, tremor, sweating, increased pulse pressure, even a loss of weight, and repeated determinations of basal metabolic rate that are above normal. These are also cardinal symptoms of exophthalmic goiter.

To render the problem of diagnosis more difficult, a large percentage of normal persons, and therefore also those with neurosis, have palpable thyroid glands. A sensation of choking or tightness in the throat, as a major complaint, even in the presence of a palpable thyroid gland, is the result of neurosis, not of exophthalmic goiter. Although the thyroid gland in exophthalmic goiter usually feels hard and has a granular surface, there may be nothing definite in its contour, consistency or size to distinguish it from the enlargement of the thyroid gland that is so common among normal persons. Since the enlarged portion of the thyroid gland in 30 per cent of cases of exophthalmic goiter contains adenomatous portions, it may be nodular in type. A prolonged systolic bruit, with its point of maximal intensity over, or near, the superior pole of one or both lobes of the thyroid gland is almost conclusive evidence, with some rare exceptions, of the presence of exophthalmic goiter. Such bruits are not characteristic of adenomatous goiter with hyperthyroidism, but even in exophthalmic goiter they are frequently absent.

The process of differential diagnosis between exophthalmic goiter and neurosis consists in analyzing the symptoms and findings common to both diseases, and in ferreting out symptoms significant of one but not of the other. It is a common error to accept a history of palpitation or of nervousness as evidence of hyperthyroidism, without having analyzed it. A patient who volunteers a history of palpitation and nervousness should be carefully cross-examined, to determine the effect which psychic factors may have had on the development of the symptoms. In obtaining the history, one should also determine if possible the type of palpitation complained of; whether the heart beats regularly, but rapidly; whether there is a fluttering sensation, the result of extra systoles; or whether intermittent attacks of cardiac irregularity last for several hours or for days, indicative of auricular fibrillation. Palpitation which is the uncomfortable sensation produced by extra systoles, is not particularly suggestive of exophthalmic goiter. Such irregularity frequently is the basis for cardiac neurosis. Usually there is nothing distinctive in the history of nervousness volunteered by the patient with exophthalmic goiter to distinguish it from that of neurosis. Answers to questions in regard to mental reactions and environment, however, may reveal emotional instability which definitely places the case as one of the neuroses. The psychic reactions in cases of exophthalmic goiter are rather diametrically opposed to those of anxiety neurosis. Although patients who have exophthalmic goiter are emotional and cry easily, as a group they are not fearful nor inclined to worry. They are self-reliant, optimistic, and ambitious, whereas the neurotic patient lacks morale. The more evidence there is in the history or in the patient's behavior in the examining room to associate nervousness with such psychic factors as selfconsciousness, introspection, lack of assurance and self-confidence, depression, overconscientiousness, worry over the insignificant details of life, and other definite or indefinite fears, the more probable it is that the case is one of neurosis. A history of good health previous to the onset of illness, with normal nervous stability, and then the development of restlessness, irritability, and emotionalism, without an element of fear, suggests exophthalmic goiter. These statements must be qualified. Obviously, a psychoneurotic personality does not render a person immune to the development of exophthalmic goiter. It is also true that fear, or the exhaustion accompanying or resulting from fear, disturbs the function of the body to an obvious degree in such a large percentage of people that its effect must also be apparent in a great many cases of exophthalmic goiter. The less there is of this element in a given case, however, the more readily the diagnosis of exophthalmic goiter can be established.

The facial expression usually suggests the presence of exophthalmic goiter even in the absence of exophthalmos, marked retraction of the upper eyelid, or other definite ocular signs such as edema of the eyelids and weakness of one or more of the extrinsic muscles. In many cases there is an expression which may be described as frowning, peering, or squinting, and this is produced by a synergetic action of the facial muscles, particularly the orbicularis oculi and the corrigator super-

cillii[3 and 4]. As the levators of the upper lip also contribute to this action, an appearance of tension is imparted to the entire upper portion of the face. This appearance is intensified by hypersensitiveness to light, a symptom characteristic of exophthalmic goiter. Because many normal individuals have this expression to some degree, it is not diagnostic, but merely suggestive of the presence of exophthalmic goiter. If slight retraction of the upper lid is associated with this frowning, peering, or squinting expression, a keen, alert, piercing look is imparted to the eyes. Increased frequency of winking[3 and 4] is characteristic of exophthalmic goiter, and this, together with a constant shifting of the direction of vision, particularly when the patient is in conversation, may complete an appearance which is nearly as diagnostic as that produced by exophthalmos, marked retraction of the upper eyelids, and edema of eyelids.

In a typical case of exophthalmic goiter, nervous irritability is marked, and may be evidenced by restlessness, unusual vivacity or animation, with rapid, incisive speech, nervous tension and emotionalism. In certain cases evidences of nervous irritability may be slight, possibly less striking than the lack of poise shown by many stimulated, excitable neurotic persons. It is seldom, however, that lack of poise quite duplicates the appearance produced by the nervous irritability of exophthalmic goiter, and it has been my experience that when I have been in serious doubt as to the source of such manifestations, later developments usually have proved them to be the result of exophthalmic goiter.

A fine tremor is usually present in cases of exophthalmic goiter, but in mild cases it may be absent or intermittent. Excitement may also produce tremor. Many normal persons have a persistent, fine tremor regardless of excitement.

A pulse rate of more than 90, with a pulse pressure of more than 50, should suggest exophthalmic goiter, but in 10 per cent of the cases of exophthalmic goiter the pulse rate in the examining room is less than 90 beats each minute. A pulse pressure of less than 40 mm. of mercury nearly excludes exophthalmic goiter. An increased pulse pressure associated with a diastolic pressure that is less than normal is particularly indicative of exophthalmic goiter. For example if the pulse pressure is 70 mm., the result of a systolic pressure of 150 mm. and a diastolic pressure of 80 mm., exophthalmic goiter may be responsible, but excitement or early essential hypertension may produce the same readings. On the other hand, in a case in which the pulse pressure is 70 mm., the result of systolic pressure of 130 mm. and a diastolic pressure of 60 mm., exophthalmic goiter is indicated, because neither essential hypertension nor excitement drive the diastolic pressure below normal; in fact, there is the opposite tendency. The increased pulse rate or pulse pressure which is the result of fear should diminish on subsequent examinations. However, the tachycardia of neurosis may be more or less persistent. The pulse rate of certain persons who otherwise give very little evidence of nervous instability, will become accelerated because of the mere consciousness that the pulse is being determined, regardless of the number of examinations. Such a tachycardia can be detected frequently by noting a normal interval between the first two or three beats, and a subsequent abrupt increase in the pulse rate.

A history of weakness, to be of diagnostic value, should be demonstrable in the examining room. Patients who suffer from neurosis usually give a history of weakness. Their weakness is a subjective sensation, whereas the weakness associated with exophthalmic goiter is an actual loss of muscular strength. Loss of strength to any marked degree can be demonstrated by having the patient attempt to step up on the step of the examining table.

I think it is important to emphasize two groups of symptoms which are of great diagnostic value and which are the direct results of the increase in the rate of metabolism. The first pertains to changes in weight in relationship to caloric intake; the second, to symptoms related to a change in tolerance for heat and cold.

In exophthalmic goiter, increased appetite, with loss of weight, has great diagnostic value. In certain stages of the disease, however, the patient may fail to lose weight and he may even gain weight to above his average normal, but if the basal metabolic rate is high, this occurs only when there is a greatly increased consumption of food. During periods of failure of appetite, when the body fat is rapidly oxidized, there is progressive loss of weight.

In connection with the second group of important diagnostic symptoms, questions relative to increased tolerance to cold usually result in more satisfactory answers than do questions relative to decreased tolerance for heat, or increased sweating. A definite history of putting the feet out from under the bed covering, of requiring cooler room temperatures than others, and of wearing less clothing after the onset of ill health, is almost conclusive proof of the presence of hyperthyroidism. The neurotic patient may give a history of increased sweating, particularly with excitement, and the skin of the hands may be moist, but usually it is cold and clammy. In hyperthyroidism, the skin is flushed, warm and moist. Information concern-

ing the symptoms of hyperthyroidism which I have just referred to, is not, as a rule, volunteered by the patient and must be elicited by direct questioning. The great value of these data, from the standpoint of diagnosis, lies in the fact that they are distinctive of hyperthyroidism, and are not present in neurosis.

The diagnosis of early, mild cases of exophthalmic goiter, in spite of careful analysis of signs and symptoms, may still be difficult to establish. One must then resort to determinations of the basal metabolic rate for further evidence. In too many cases, the diagnosis of hyperthyroidism is based on one determination. If only one determination is required to confirm the diagnosis it is questionable whether the test is needed at all. If determinations of the basal metabolic rate are actually necessary for diagnosis, two and often a series of tests on consecutive days, never on the same day, should be obtained. In a case in which the patient's symptoms suggest anxiety neurosis, and the basal metabolic rates on consecutive days are plus 30, plus 20 and plus 15 per cent, the step-like reduction in rate may confirm the diagnosis. Such initially high rates are often basal so far as the technician can determine. In a case in which the symptoms suggest exophthalmic goiter and the basal metabolic rates on consecutive days are plus 15, plus 13 and plus 14 per cent, the very fact that a definite level of metabolism has been established, even though the rate is only slightly above normal, may confirm the diagnosis. If, after having obtained such an average level of metabolism the diagnosis is still uncertain, iodine should be administered for a week or ten days and another series of rates obtained. If, for example, in the second series, the rates are plus 4, minus 3 and plus 2 per cent and there is some symptomatic improvement the diagnosis of exophthalmic goiter may be established in spite of the fact that the average level has been lowered only slightly by administration of the iodine. It should always be remembered that rates within the so-called normal limits, particularly those above zero, may represent hyperthyroidism, for many persons normally have rates of less than minus 10 per cent.

Many signs and symptoms of exophthalmic goiter have been omitted from this discussion because they are not sufficiently characteristic or because they are too indefinite to be of diagnostic value during the stage of the disease when diagnosis is difficult.

In addition to the group of cases which must be distinguished from neurosis, there are several other distinct groups in which differential diagnosis is difficult. There are cases in which a vomiting crisis develops early in the course of the disease, before other symptoms have been noticed. If the vomiting has been precipitated by an acute infection such as tonsillitis or influenza, its cause is particularly likely to be overlooked. There is another group of rare cases in which exophthalmos, edema of the eyelids, and possibly paralysis of one or more of the extrinsic ocular muscles develops or progresses during periods when the basal metabolic rates are within, or even below normal levels. There is also the group of cases which first come under observation during a break in cardiac compensation which completely masks the symptoms of hyperthyroidism. Determinations of the basal metabolic rate are inaccurate during the period of decompensation. Although auricular fibrillation may occur in most cardiac diseases, it is particularly common in the presence of hyperthyroidism. The low-grade, persistent hyperthyroidism of adenomatous goiter is particularly likely to culminate in cardiac decompensation without the patient having previously recognized any signs of ill health other than the symptoms of the approaching cardiac break.

There are certain rare, atypical cases with various bizarre manifestations. Their atypical features usually can be explained by the fact that in certain cases exophthalmic goiter produces little appearance of nervous stimulation and by the fact that exophthalmic goiter may uncover certain latent tendencies or defects. For instance, the only complaint may be of severe urticaria or generalized pruritis, chronic diarrhea or severe dyspepsia. If a person has a tendency to psychosis, exophthalmic goiter may precipitate an episode of it. An appearance of prostration, together with loss of weight and strength, may lead to the erroneous diagnosis of malignancy. Occasionally protracted exophthalmic goiter produces a moderate degree of anemia, but probably only if the person is predisposed. Primary blood dyscrasia might be suspected, however, since achlorhydria and palpable spleen are often present in cases of exophthalmic goiter. Glycosuria frequently occurs in the presence of exophthalmic goiter, and in the presence of an abnormal appetite it may lead to an erroneous diagnosis of diabetes.

When exophthalmic goiter develops during the course of some unrelated organic or functional disease, its diagnosis may be very difficult, and its presence may be overlooked for a long time. There are certain very definite reasons that explain the failure to recognize hyperthyroidism in such complicated cases. Hyperthyroidism tends to aggravate any disease with which it is associated, either functional or organic, and as hyperthyroidism itself does not produce actual pain in the thyroid gland, or elsewhere in the body, the pa-

tient constantly directs the examining physician's attention to the symptoms of the associated disease and away from the symptoms which might lead to the diagnosis of hyperthyroidism. The patient himself fails to emphasize the symptoms of hyperthyroidism, for he attributes his weakness, nervousness, and so forth, to the associated disease. Among the many diseases, organic and functional, in which the symptoms are aggravated by exophthalmic goiter or hyperthyroidism associated with adenomatous goiter, may be mentioned bronchial asthma, pernicious anemia, angina pectoris[2], duodenal ulcer, diabetes, hypertensive heart disease, migraine, various forms of neurosis, Parkinson's disease, and so forth.

In this paper I have emphasized the cases in which the diagnosis is most frequently difficult, those which must be distinguished from neurosis. There are no special criteria for diagnosis of atypical cases or for those associated with other diseases. One must constantly bear in mind the peculiar characteristics of the disease and always be "goiter conscious."

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THE DIAGNOSIS AND MANAGEMENT OF THE TOXIC THYROID*

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For the purpose of this discussion I shall divide toxic goiter into two groups, namely, exophthalmic goiter and the toxic adenoma.

DIAGNOSIS

Exophthalmic goiter is a constitutional disease characterized by remissions and exacerbations of various degrees of intensity. When left untreated it pursues its own course, causing a high mortality rate, and leaving in its wake great morbidity from the damage to the cardiovascular, renal, and nervous systems. It is seen more frequently in women than in men, and the condition is usually found in young adults. Tremor, tachycardia and nervousness are early symptoms, followed by a loss in weight, enlargement of the thyroid, and exophthalmos.

The patient with a toxic adenomatous goiter does not have remission and exacerbations, but tends to get progressively worse. This condition also occurs more frequently in women than in men, and the majority of the patients are over forty years of age. They have had these adenomatous masses for many years without symptoms, but gradually become nervous, develop tumors, lose weight, and usually notice that the goiter is increasing in size. The diagnosis of well pronounced hyperthyroidism, whether due to exophthalmic goiter or toxic adenoma, is not difficult. The surgeon should determine the amount of damage done to the various organs of the body, especially the heart.

The keenest judgment is required in the diagnosis and management of the early or borderline cases. As a rule the early exophthalmic goiter is more confusing than the toxic adenoma.

Patients with toxic goiter may present a group of symptoms so numerous as to baffle the most expert students of the disease. Some of the symptoms are comparatively constant among patients afflicted with hyperthyroidism, but many of them are not, and may be considered lightly. It is obvious that vasomotor disturbances, such as excessive sweating, flushing of the skin, painful extremeties and diarrhea fall into this category. In the final analysis the diagnosis should be made on the more constant symptoms and signs, namely, nervousness, tremor, loss of weight, tachycardia, exophthalmos and an increased basal metabolic rate.

The former teaching was that tumor, tremor, tachycardia and exophthalmos were the cardinal symptoms, and while these signs are significant and not to be disregarded, the teaching has now been modified to include others equally important.

Nervousness, as a symptom, is of a very indefinite nature. A large percentage of patients who are ill call themselves nervous, and many may appear to have hyperthyroidism. The nervousness of true hyperthyroidism, however, is very pronounced; the patient has the fidgets constantly and during the examination is frequently fixing the hair, adjusting the clothing or tapping the floor with the feet. When the patient is confined to bed he will chafe the skin of the elbows and knees even to a point of ulceration. He is often very irritable and, if opposed, is apt to be unreasonable. He readily bursts into tears, but has a tendency to regain his composure rapidly. On the whole his outlook on life is rather optimistic, in marked contrast to that of the psychoneurotic patient.

Tremor of the hands, fingers, tongue and sometimes the lips, usually considered a cardinal symptom, is probably a manifestation of muscular de-

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generation caused by the excessive amount of thyroxin present in the tissues.

Loss of weight is rather striking and should be at least five per cent of the body weight. Loss of strength is one of the earliest symptoms and is usually first noticed in going upstairs, or in stepping upon a chair. The weakness of the quadriceps muscle group is so specific and characteristic of hyperthyroidism that it has diagnostic significance.

Tachycardia, if persistent and associated with an increased pulse pressure, is characteristic in the true case of exophthalmic goiter; that is, a rate at rest of 90 or above in the adult, and of 100 or more in the child. The pulse rate should be taken with the stethoscope over the apex, otherwise the pulse record may be erroneous. Auricular fibrillation is present, either chronically or intermittently, in about four-fifths of the patients with exophthalmic goiter and adenomatous goiter with hyperthyroidism. Auricular fibrillation in itself is not a contraindication to operation, although it is evidence that the heart in question is showing the strain of hyperthyroidism. However, a rate of 140 or over, if regular, seems to have a worse prognosis during and following operation than similar rates associated with auricular fibrillation.

Auricular flutter has been noted in exophthalmic goiter usually through electrocardiographic study. It may also be recognized by inspection of the jugular veins, if the pulsations are more frequent than the apical heart rate, but the identification of this abnormal mechanism must be made by an electrocardiogram. Massive doses of digitalis are indicated and should be given until a complete block is produced.

Bilateral exophthalmos when present is very distinctive of exophthalmic goiter. Unfortunately exophthalmos is not present in 30 per cent of the patients when they first consult a physician, and if proper treatment is instituted it may never appear. The slight exophthalmos occasionally seen in nephritis, the familial type, or that due to intra-orbital tumors, is rarely, if ever, confusing.

There are many other eye signs that have been noted, such as widening of the palpebral fissure, lagging of the upper lids on excursion of the eyes, and failure of the eyes to converge for near vision.

The presence of goiter is a positive sign, and is confused only by the fullness or prominence of the gland in very thin females. The goiter of the exophthalmic type is frequently not large, but is always symmetrical and firm to touch. In those cases of exophthalmic goiter which are unsymmetrical or nodular in appearance, we usually find that these patients have had adenomatous masses present in the thyroid gland prior to the onset of this disease. Approximately one-third of the cases of exophthalmic goiter have entirely independent adenomatous masses. For this reason, it is sometimes very difficult to make a clinical diagnosis between exophthalmic goiter and adenomatous goiter with hyperthyroidism.

Exophthalmic goiter usually makes the glands more vascular and bruits are frequently heard. When the superior thyroid vessels can be palpated as distinct tortous vessels, a thrill may be imparted to the examining finger, in addition to the bruits heard on auscultation. In extremely marked cases the entire gland seems to pulsate.

The basal metabolic rate is increased in exophthalmic goiter from plus 20 to plus 100 or more in about 95 per cent of the cases. Aside from adenomatous goiter with hyperthyroidism there is no condition except the leukemias in which the basal metabolic rate has as yet been demonstrated to be characteristically elevated. It is a very rare instance to find an increased metabolic rate in an apparently normal individual so that an increased rate of this nature may be accepted as a positive indication of exophthalmic or adenomatous goiter with hyperthyroidism. However, it is not wise to rely on one basal metabolic reading since no case of the border line type should be diagnosed on one test.

An excessive appetite without gain in weight is particularly characteristic of this disease, and is due to the demands of the increased metabolism for fuel. Sometimes very small individuals require as many as 4,000 to 5,000 calories daily to maintain body weight even in bed.

At times gastro-intestinal crises of nausea, vomiting and diarrhea supervene and as a result the patient is able to retain very little nourishment or fluids. In that event the loss of weight is marked and rapid. These cases are practically uncontrollable, although energetic treatment can be instituted with sedatives, fluids, iodine and glucose, given intravenously if necessary. It is doubtful if the results, even with the most active and intelligent treatment, are worth while. However, these spells have a tendency to be self-limited and seem to begin and end spontaneously.

The skin is moist and feels hot to the hand because of the increased heat elimination. Occasionally in exophthalmic goiter of long standing there is a distinct pigmentation of the skin. The finger nails often become streaked, flattened and spade-like with turned up ends and a deep undercut, making cleansing difficult.



Fig. 1. This shows the ordinary collar incision.



Fig. 2. This shows the division of the fascia in the median line.



Fig. 3. This shows the division of the capsule of the thyroid in our effort to do a thyroidectomy within the capsule.



Fig. 4. This shows the isolation, clamping and ligation of the superior pole of the thyroid.



Fig. 5. This shows the rotation of the gland and the ligation of the anterior branch of the inferior thyroid vessels.



Fig. 6. This shows the method of dividing the isthmus of the thyroid.



Fig. 7. This shows the method of having the isthmus freed from the trachea, the entire gland held in the hand, and the section of the gland down to the small amount in the tracheo-esophageal angle, leaving a very small amount of glandular tissue together with the posterior capsule. As was pointed out by both Dr. Barr and Dr. Richter, in hyperthyroidism it is not necessary to leave any large amount of gland.

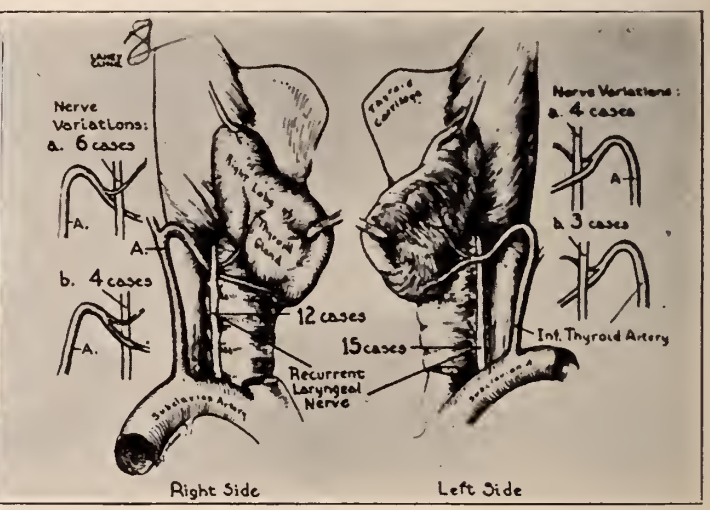


Fig. 8. This is a drawing from the Lahey Clinic which shows the relationship of the recurrent laryngeal nerve to the thyroid vessels. This, in twelve cases, was anterior to both branches of the inferior thyroid vessels. Here one branch was anterior, and here both branches were anterior. On the other side it shows four cases in which one branch was anterior, three cases in which both branches were posterior, and the other thirteen cases, in which the vessel was anterior to both branches.

TREATMENT

I feel that hyperthyroidism in children should be treated conservatively, that is, by small doses of x-ray, iodine, rest in the country away from school, and the noise and excitement of the city. However, I feel that those nearing twenty, and adults, should be treated by surgery. Radiotherapy may have curative powers but it has the disadvantage of delay and a chance of failure after many months of trial; then if failure does occur, surgery is made more difficult, because the glands are harder to deliver, and bleed more readily.

I do not differentiate in the surgical treatment between exophthalmic goiter and adenomatous goiter with hyperthyroidism, since they both suffer qualitatively from the same hyperthyroidism, although individuals will differ in age, severity of symptoms, and the degree of cardiac involvement.

There are three important objectives in all cases, namely, rest, nutrition and iodine. At times the cardiac element also has to be taken care of, and occasionally one sees a true diabetic patient. This, of course, makes it imperative to modify the dietic regime, but if the condition can be controlled with insulin, so that a relatively high caloric diet can be given, diabetes *per se* is of no particular consequence, and is usually influenced favorably by operation.

Rest. Complete continuous rest in bed is not advised except for those cases with congestive heart failure. For the cases with cardiac decompensation, we institute a typical regime for that condition, irrespective of their hyperthyroidism, providing a crisis does not intervene. For example, a woman with a large adenomatous goiter with hyperthyroidism and long standing heart disease was admitted to the hospital in November, 1931, with acute decompensation and auricular fibrillation. She was put to bed, with forced fluids, and given digitalis and iodine. She made rapid improvement, at the end of a week was able to be out of bed, and felt better than she had for months. She was in a two-bed ward and following her operation a patient had been placed in the other bed. This action caused a typical thyroid crisis of nausea, vomiting, high temperature, and cardiac decompensation, to supervene. She was unable to retain anything by the mouth or the rectum, and it was only through energetic treatment by sedatives, saline under the skin, and glucose and iodine intravenously that we were able to ward off an impending disaster. After three weeks her condition did not warrant thyroidectomy, and I was compelled to proceed with the operation in stages which she stood satisfactorily. In less severe cardiac cases, I have found it wise, if possible, to improve their general condition by rest until they are able to be up in a chair for a time each day before I give them any iodine. The fact that a patient can tolerate this amount of activity can be taken as an indication of considerable restoration of heart efficiency.

Nutrition. Loss of weight and strength is the result of increased metabolism, and a loss in muscle substance and fat. I believe that the diet should be well balanced, with a marked increase in carbohydrates and fat, accompanied by an adequate increase in protein, together with a large fluid intake.

Iodine. The value of iodine is well established in the preparation of patients with hyperthyroidism for operation. My judgment is that a tolerance is often quickly established, and that iodine should be used only after a patient has consented to be operated upon. As a rule, the maximum result is obtained in from two to three weeks. I usually give one c.c. a day in divided doses for the first week, and two c.c. a day thereafter.

Digitalis. This is of no value in the simple tachycardia of hyperthyroidism, but we use it in congestive heart failure to retard the ventricular rate, just as it is used in ordinary heart disease unassociated with hyperthyroidism, and in cases of auricular fibrillation.

Time for Operation. We do not depend entirely upon improvement in the basal metabolic rate to set the time for operation, because, unfortunately, this test does not indicate the exact operability with sufficient accuracy. Of course, an improvement in the metabolic rate is necessary but we consider an improvement in the average pulse rate, the body weight, and general clinical appearance of the patient, of equal importance. If the patient shows an improvement in all four of these points, we are satisfied. If there is no improvement in any one of them, we prolong the preoperative period to three weeks. A longer preparation is not usually followed by satisfactory results. If, at the end of three weeks the patient does not show sufficient improvement for the complete operation at one sitting, it is then best to proceed with an operation in stages.

POSTOPERATIVE MANAGEMENT

After operation the objects of treatment are rest, fluids, nutrition and iodine.

Rest. During this period sedatives are most important and morphine should be used freely. We should watch for an idiosyncrasy to morphine since it is not infrequent in hyperthyroidism. If such is the case allonal or paraldehyde are then most useful.

Fluids. A large fluid intake is important before operation, but is even more so after operation. In the first forty-eight hours the patient should have an intake, or perhaps better an "input" of six to seven liters, by use of tap water per rectum, of glucose intravenously, or saline, by hypodermoclysis, and iodine to be added, to method of choice.

Nutrition. As soon as swallowing becomes reasonably easy, fluids of all sorts should be given the patient, and a soft diet is rapidly added. High caloric intake is again important, but is not as essential as it is in the preoperative period.

Iodine. Iodine can now be taken by mouth and the large doses required immediately after operation are no longer necessary. Either Lugol's solution or sodium iodide can be used, and the daily dose is rapidly reduced to one c.c. or 0.1 gram, respectively. This dosage is continued for one month after discharge from the hospital, and then further reduced one-half for the second month after operation. If Lugol's solution or sodium iodide is objectionable to the patient, one can use the syrup of hydriodic acid or lypoiodine "Ciba" in equivalent doses.

COMPLICATIONS

The typical postoperative crises of severe degree are far less common than they were before the use of iodine, but they do occur in the severe cases. In the cases that develop coma and suggest acute deprivation of the thyroid substance, good results have been reported from the use of thyroxine intravenously, but my experience with it it too limited to be of value.

Postoperative hemorrhage must be handled as the occasion demands. If heavy bleeding occurs, it may be from an artery which must be ligated; if there is only a small amount of blood, oozing from several points, it can be controlled by packing. The majority of cases will show some tracheal irritation for a few days. Inhalations of steam and codeine by mouth will usually control it promptly.

If the patient has a good voice at the conclusion of the operation, one need not be concerned over a hoarseness occurring a few hours later.

The fact that postoperative tetany may develop even though none of the parathyroid bodies was removed, is probably due to impairment of their blood supply. A tingling sensation in the hands and feet or a tightness and stiffness of the lips often appears before the typical carpopedal spasm and positive Chvostek's sign. This warning should be heeded and the calcium content of the blood should be determined immediately. Before this laboratory report is obtained, the patient should receive ten or fifteen units of para-thor-mone, and doses of calcium lactate should be started. If actual convulsions occur, the para-thor-mone should be repeated as often as necessary, and the calcium lactate should be continued until the blood calcium has regained its normal level, but not beyond this point. If the patient is unable to take calcium lactate by mouth, it may be given intravenously, preferably as calcium acetate, or even calcium chloride.

Before our patients leave the hospital, we should attempt to make them understand the nature of their disease and the physiologic principles involved in their future course. Too early return to full activity is extremely bad, and yet it is of utmost importance that they should receive the psychologic stimulus from a return to at least partial activity as early as possible. The cases with cardiac damage must accept a more prolonged or permanent restriction of activity, but a vast majority of the remainder may look forward to real health.

As a general rule, we do not restrict the diet, but urge a large water intake between meals. Sedatives are rarely required, but we do have our patients take Lugol's solution or syrup of hydriodic acid for two months.

THE DIAGNOSIS OF MYXEDEMA*

CLARENCE W. BALDRIDGE, M.D., Iowa City

A fairly common disease, distinctive in its clinical manifestations and recognized since 1873 (Gull), for which satisfactory treatment was announced in 1891 (Murray), would not, under ordinary circumstances, be commonly missed by present-day physicians. Yet it seems that well developed myxedema is frequently overlooked by practitioners.

The University hospital records of sixty cases diagnosed as "hypothyroidism" were examined for this study, and of these, twenty-two were accepted as advanced cases of spontaneous myxedema. One case was excluded from this study because the diagnosis had been previously made and the patient had been on treatment for some time before we saw her. In a few of those cases not included, the symptoms followed the surgical removal of the thyroid, but the vast majority of those rejected were mild or questionable cases of hypothyroidism. Insofar as this condition is concerned the designations "mild" and "questionable" are almost synonymous unless the effects of treatment can be carefully observed. Many cir-

*Presented before the Eighty-second Annual Session, Iowa State Medical Society, Des Moines, May 10, 11, 12, 1933.

cumstances seem to interact to make the diagnosis of early or incomplete hypothyroidism very difficult and uncertain. Decrease in oxygen consumption regardless of its cause is often associated with sensitiveness to cold, decrease in sweating and lessened muscular activity. Chronic inactivity may be either the cause or the result of a moderately lowered basal metabolism. The first symptoms to be manifest in spontaneous hypothyroidism are common to most conditions in which the basal metabolic rate is below normal. Some of the conditions commonly showing hypometabolism will be mentioned.

Nephrosis is usually associated with a moderate lowering of the oxygen consumption. Factors which may contribute to the lowering of the basal metabolic rate in nephrosis are excess of body weight due to non-respiring edema fluid, a loss of unmetabolized protein in the urine, and in some instances actual destruction of the thyroid gland.[1] The following manifestations are common to hypothyroidism and nephrosis: edema, puffy eyelids,



Fig. 1. Here is a woman with a typical myxedema face. The hair is dry and brittle. The face is round and expressionless because the skin and subcutaneous tissues are inelastic and thick. The eyebrows are scanty and the eyelids slightly puffed. The hair is usually coarse in patients with spontaneous myxedema but this feature is of no great diagnostic importance.

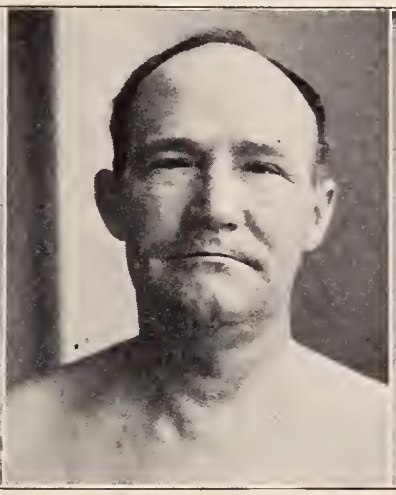


Fig. 2. Here is another typical myxedema face. This man felt that he had had myxedema for many years and he had seen twenty-two physicians all of whom agreed that he was suffering from pernicious anemia.

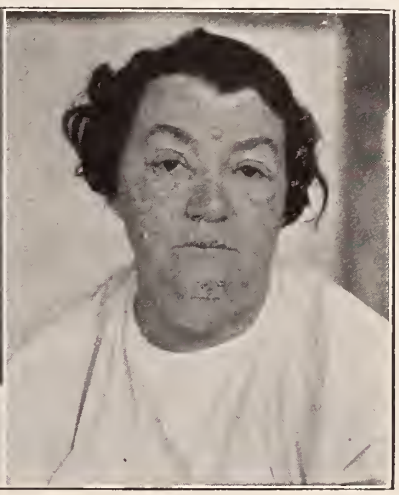


Fig. 3. Another woman with spontaneous myxedema. Members of the "myxedema family" certainly bear striking resemblances to one another.



Fig. 4. Here is a woman with rather mild or early spontaneous myxedema. Her face does not show the fully developed changes because actual myxedematous tissue has not yet been laid down.



Fig. 5. Notice here the thickness of the facial features and of the wrists.



Fig. 6. A picture of the same woman after treatment shows a return of her normal facial lines and expression. Her wrists and hands are smaller than they were because actual myxedematous tissue has been resorbed.



Fig. 7. Here is an example of complete loss of hair from the body. Some loss of hair from the head is the rule in myxedema but usually it is not complete. This woman responded beautifully to thyroid extract and to thyroid extract alone.

Fig. 8. Here she has a fair start toward recovery.

Fig. 9. This shows her as she is now.

gain in weight, sensitiveness to cold, pallor and anemia, and low basal metabolism. As a rule the patient with nephrosis is easily recognized because of excessive edema, low plasma protein and large amounts of protein in the urine. The basal metabolic rate in a patient with nephrosis does not increase as rapidly as does that of a patient with myxedema when thyroid extract is ingested. The same state of affairs obtains in some other diseases in which there is what appears to be non-myxedematous hypometabolism. Whether this effect is due to destruction, lack of absorption, or lack of response to the thyroid substance, might be determined by the parenteral injection of thyroxin. Some patients with nephrosis seem to be benefited by rather large doses of thyroid extract by mouth. Perhaps true hypothyroidism may be present in nephrosis but so far as the author is aware, myxedematous tissue has not been demonstrated in patients suffering primarily from nephrosis.

Simmonds' disease presents as one of its essential features, a marked lowering of the basal metabolic rate[2 and 3]. In this disease the loss of the anterior pituitary hormones seems to permit an inactivity and finally an atrophy of the thyroid gland. The manifestations of Simmonds' disease resemble those of myxedema in that the oxygen consumption is lowered, there is a dry skin with loss of hair, there is sensitiveness to cold, weakness, anorexia and mental changes. The additional symptoms in Simmonds' disease such as loss of weight, amenorrhea, or impotency, are usually attributed to the loss of the growth-promoting and sex-stimulating hormones from the anterior lobe of the pituitary gland. A most profound loss of weight is an outstanding manifestation of Simmonds' disease and this feature is important in separating the condition from myxedema. The diagnosis of Simmonds' disease depends upon the symptoms mentioned above, and upon roentgenologic evidence of disease in the sella turcica, or upon a specific response to the injection of a potent extract of the anterior lobe of the pituitary gland.

Obesity is often associated with such symptoms as weakness, nervousness, constipation and sparseness of body hair. Furthermore, the excess fat adds greatly to the body weight but not so much to the oxygen consumption, so that the basal metabolic rate may be somewhat below normal. Enormously fat people rarely have true myxedema and it is doubtful whether they have any primary deficiency of thyroid activity. The induction of hyperthyroidism in the obese will cause a loss in weight but doses of thyroid extract which are insufficient to produce hypermetabolism also appear to be insufficient to cause loss of weight.

Under-nutrition due to inadequate food intake or absorption is also associated with hypometabolism. In starvation the basal metabolism eventually reaches a level as low as in severe myxedema. This appears to be nature's method of meeting a depression. Cases of marked under-nutrition may resemble Simmonds' disease very closely, but they do not resemble myxedema except in regard to the lowered oxygen consumption and its associated symptoms.

Basal metabolic rates as low as 20 per cent below normal are not rare in normal people or in patients convalescing from a wasting disease.

A condition which is very difficult to distinguish from mild hypothyroidism is the so-called "low rate neurasthenia." Plummer speaks of a syndrome in which the basal metabolism is about 20 per cent below normal, in a woman with a functional attitude, black hair and grating knees. This woman is a piano player and is divorced. Not all of these manifestations are necessary. The so-called "low rate neurasthenic" usually complains of weakness, nervousness, exhaustion, constipation, skeletal or muscular pains, and is often pale and may be slightly anemic. These patients are sensitive to cold, they pluck their eyebrows, and perhaps their axillary hair. Indeed, such patients may present all of the symptoms of hypothyroidism except those which are found only in advanced cases of myxedema. They are not benefited by thyroid extract, but instead develop palpitation with accentuation of the nervousness, irritability and exhaustion.

It is largely due to this latter group that the diagnosis of incipient spontaneous myxedema is so difficult. The diagnosis should not be considered to be definitely established until objective beneficial effects from thyroid ingestion have been observed over a long period of time.

The following table presents the important symptoms and their relative frequency in 22 cases

FREQUENCY OF SYMPTOMS OF SPONTANEOUS MYXEDEMA

	Chief complaints	Elicited by question or examination	Denied or not found on examination	Not ascertained
Weakness Fatigability	13	7	....	2
Dry skin	4	16	1	1
Sensitiveness to cold	3	15	1	3
Skeletal or muscle pains	8	9	....	5
Slowness of thought or movement	5	11	....	6
Puffy eyelids	3	13	....	6
Constipation	2	12	8	..
Loss of hair	2	13	1	6
Voice change	2	12	....	8
Shortness of breath	5	9	6	2
Abasia	2	10	..	10
Edema of the ankles	4	8	7	3
Nervousness	2	10	....	10
Thick Tongue	....	12	2	8
Mental changes	2	9	1	10
Myxedematous tissue	....	11	1	10
Yellowish pallor	1	10	....	11
Slow alternate motion rate	....	11	..	11

of definite spontaneous myxedema. The average initial basal metabolic rate was 30 per cent below normal, the erythrocyte counts averaged 3.5 millions per cu. mm. and the hemoglobin determinations averaged 65 per cent.

A glance at the presenting symptoms will show that they are often not very enlightening. Certainly, there is nothing unusual about such complaints as weakness, skeletal or muscle pains, and shortness of breath. Most of the symptoms and signs must be elicited by special questioning and thorough examinations. Inquiries as to dry skin, sensitiveness to cold, puffy eyelids, loss of hair, voice changes, abasia, thickness of the tongue and mental changes, are not routine questions so far as most physicians are concerned. As a matter of fact we found no evidence in any case that the diagnosis had been made during the course of a routine history or physical examination. In every instance in which the diagnosis was made the patient's general appearance suggested the nature of the ailment. The round placid, expressionless face, with scanty eyebrows and puffy eyelids, the dry skin with its muddy, yellowish pallor, the deliberateness (both mental and physical), and the deep, croaking voice, make a characteristic picture. The history must be taken from them literally. In one of our cases the general appearance did not suggest myxedema. We missed the diagnosis completely and because we attributed the anemia to a gastro-enteric lesion, we advised an exploratory operation. The true diagnosis was later arrived at largely by accident at the Mayo Clinic. The attending physician at Rochester assured me that the basal metabolic rate of 41 per cent below normal was a major surprise to him, as it certainly was to me.

Of these 22 cases of advanced myxedema, one was diagnosed at the Mayo Clinic before we saw the patient and the one mentioned above was diagnosed at the same clinic after we had missed it. None of the others was correctly diagnosed by the referring physician. Fourteen of the 22 cases were first seen by the younger members of the staff and of these 14, seven were missed by the first examiner. They have been missed by all of us from chief to first year interne and it is impossible to estimate how many we have missed completely, but we hope that the number is small.

One should think of myxedema in every patient with unusually dry skin, puffy eyelids, unexplained loss of body hair or unexplained secondary anemia. By attention to the above changes we might be able to rescue the occasional case of myxedema who does not present the typical appearance, or in whom we fail to recognize the typical general

appearance. It should also be stated that an attempt to follow the above suggested rules will result in our having basal metabolic rate determinations done on a vast number of non-myxedematous patients.

Myxedema is often erroneously diagnosed as pernicious anemia, idiopathic hypochromic anemia, nephritis, heart disease, arthritis, or psychoneurosis. Less commonly it is confused with such conditions as pelvic disease, arteriosclerosis, psychosis, gastro-enteric disease, tabes dorsalis or encephalitis.

Conditions which may be erroneously diagnosed as hypothyroidism are: nephrosis, Simmonds' disease, idiopathic hypochromic anemia, deforming arthritis, obesity, undernutrition, but most especially psychoneurosis.

The above lists are, of course, not complete in either instance.

SUMMARY

A review of our cases from the standpoint of diagnosis suggests the two main conclusions which have previously been stressed by many clinicians:

1. Spontaneous myxedema is most readily diagnosed from the general appearance and attitude of the patient[4 and 5].

2. Mild hypothyroidism is very difficult to diagnose and most patients in whom the diagnosis is considered are eventually proved to be suffering from a functional nervous disturbance.

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I want to show some photographs to illustrate the points I have tried to make concerning the typical facies in myxedema.

Discussion

Dr. Frank J. Rohner, Iowa City: Of all the glands of internal secretion, we know more about the thyroid than of any other. Its symptomatology, physical findings, along with the patient's metabolic rate allow us to make a diagnosis reaching all the way up the scale, beginning with myxedema and hypothyroidism, the function of the normal gland, mild hyperthyroidism, on up to extreme hyperthyroidism.

There is no gland in the body that we are able to deal with therapeutically any better than the thyroid—employing thyroid extract in hypofunction, and surgery in hyperfunction.

We have just listened to three very excellent papers: the first by Dr. Plummer dealing with early hyperfunction and its differentiation from functional disorders; the second, moderate and easily diagnosed hyperfunction, by Dr. Thornton; and, lastly, hypofunction by Dr. Baldridge.

The therapeutics of the treatment of hyperthyroidism have undergone a great change in the memory of all of us. I can recall, as an instructor in medicine trying to teach therapeutics, the time when we would have flunked a student who said, "Give iodine to a case of hyperthyroidism." Now one would feel like flunking him if he does not say it.

Dr. Plummer very thoroughly covered the differential diagnosis of the early cases. I cannot add to or detract from anything he has said. His remark that "one metabolism test is not sufficient," especially pleased me. He also said that if the diagnosis could be made with only one metabolism test it could be made without it.

Dr. Thornton covered in an exhaustive manner the preoperative, operative and postoperative treatment of the typical case of hyperfunction.

Dr. Baldridge called our attention to the fact that many cases of myxedema are missed because we do not think of its possibility; in other words, we do not have the diagnosis in mind. If we had a little sign in our office, "Be on the lookout for myxedema," we would probably discover many of these unsuspected cases.

HYPERINSULINISM*

Case Reports and Discussion

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WILLIAM MCDONOUGH, A.B., M.D., New York City

The object of this paper is to take another syndrome out of the great wastebasket of "neuroses." We are sure that the clinician who is "hyperinsulinism conscious" will see many patients who have been labeled "neurasthenics," and that he will be able to relieve them when the proper diagnosis has been made. We have seen as many as six patients on whom we have made this diagnosis in the short course of six months in a small clinic devoted to private practice, and have rescued them from the diagnosis of psychoneurosis or gastro-intestinal neurosis, relieving them of their symptoms by the proper application of treatment.

Clinically the syndrome of hyperinsulinism is characterized by spells of weakness associated with hunger, trembling, anxiety or fear and sometimes sweating. Severe hypoglycemic attacks produce mental confusion, disorientation, amnesia, petit mal and even epileptiform seizures. One patient, for instance, said that while walking the street he might be suddenly seized with a great fear and weakness. He would be absolutely unable to go on across the street and would stand there trembling, barely able to hold himself erect. He often carried a flask of brandy, a drink of

* Presented before the Eighty-second Annual Session, Iowa State Medical Society, Des Moines, May 10, 11, 12, 1933.

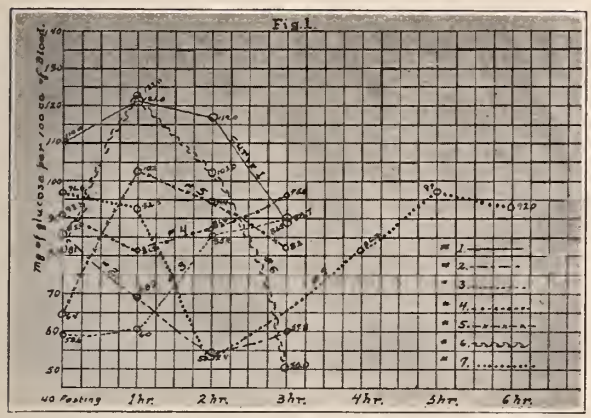


Fig. 1—These are curves taken of seven cases of hyperinsulinism, all showing a low type of sugar tolerance test. Some of them showed as low a test as 50 milligrams, which often caused an attack of hypoglycemia.

which would immediately revive him so that he would be able to go on. Such spells usually come when the patient is hungry and are accompanied by a "gone" feeling in the epigastrium. This latter symptom has often led to the diagnosis of duodenal ulcer. It was true in two of our cases. If the feeling of fear dominates he probably has been told that he has an "anxiety neurosis," as happened in two of our cases.

Etiology and differential diagnosis: In 1924 Cammidge[1] made the statement "There is no evidence that an excess of the internal secretion of the pancreas 'insulin' is ever formed naturally, but there is both experimental and clinical evidence that a subnormal sugar content of the blood may arise from defective formation of its glycogenolytic ferment by the liver." Since he wrote that article, however, there has been clinical evidence to the contrary. Seven definitely proved cases of hyperinsulinism have been reported due to islet tumor of the pancreas resected surgically with alleviation of symptoms. All seven of these cases show markedly increased sugar tolerance curves. Some cases of functional failure of glycogen storage or release in the liver may give rise to low fasting blood sugar levels, but failure of glycogenolysis should not give rise theoretically to low sugar tolerance curves.

Folin and Berglund[2] state that the low subfasting blood sugar levels often seen in sugar tolerance curves three hours after ingestion of the carbohydrate, are quite as normal a consequence of carbohydrate ingestion as hyperglycemia but that the hypoglycemia comes later. They believe that this hypoglycemia is due to a lack of demand for sugar by the tissues already saturated with glucose, and therefore transportation of sugar by the blood stream ceases. A low level then, after an initial rise, is not necessarily to be interpreted as a hyperinsulinism curve.

A true case of hypoglycemic attacks due to failure of glycogen storage and release by the liver might, therefore, have a low fasting blood sugar but the sugar tolerance test would show a rapid and sustained rise of sugar in the blood because the liver is not taking the sugar out of the blood to make glycogen, whereas hyperinsulinism would keep the values low throughout the test or would make them very low by the second or third hour, because so much insulin is consuming the sugar during the test. For instance, a proved case of islet tumor of Wilder, et al[3], did allow a rise in one-half hour from 85 to 218 mgms. to be knocked down at the third hour to 31 mgms.

However, a consistently low flat sugar tolerance curve may not be due to hyperfunction of the islets only, but as Harris[4] states may be due "to a loss of the substances that are antagonistic to insulin as in hypo-adrenalism, hypothyroidism, pituitary dysfunction or complications of these, and from conditions in which dextrose is lost from the body, e. g., in renal glycosuria or as other sugars, e. g., in lactation." These conditions demand appropriate and often difficult diagnostic measures to differentiate them from each other.

Therefore, we feel that the sugar tolerance curve rules out failure of hepatic glycogen function. Furthermore it is doubtful on the basis of Mann's[5] experimental work if such cases can exist without other obvious signs of gross liver disease being present. Mann[5] found that there was only a slight difference in the blood sugar level with but 15 per cent of the liver substance remaining. The case of hypoglycemic attacks reported by Nadler and Wolfer[6] shows destruction of 70 to 80 per cent of the liver tissue and degeneration of the remaining liver parenchyma. It is unfortunate that in this case no sugar tolerance test was made to compare with the curve of a proved case of hyperinsulinism due to islet tumor.

The administration of adrenalin or pituitrin during a hypoglycemic attack in order to mobilize glucose from hepatic glycogen, does not offer much aid. Failure of glycogenolysis under the whip of adrenalin may cause no rise of blood sugar, but a large amount of insulin in the blood stream in true hyperinsulinism might also prevent a rise. Such was actually the fact in an unreported proved case of islet tumor, reviewed by one of us through the courtesy of Dr. Francis Newton of the Peter Bent Brigham Hospital. In this case no rise in the blood sugar during a sugar tolerance test occurred on the administration of adrenalin.

Determination of the respiratory quotient ought also to be of primary importance in determining that an excess of insulin is actually causing the carbohydrate to be combusted, thus bringing the blood sugar to a low level instead of that low level

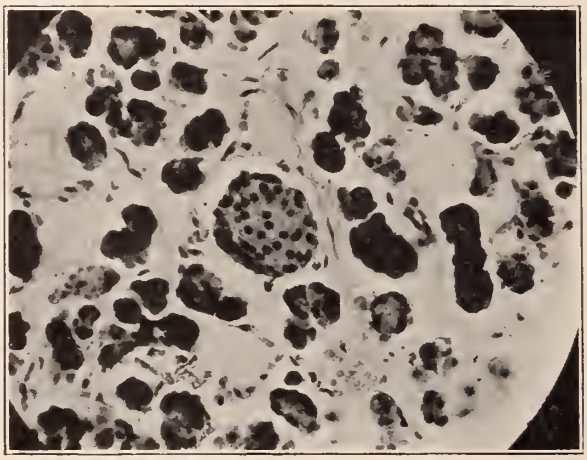


Fig. 2—Hypoplastic and atrophic parenchyma. Normal islet in center.

being produced by a failure of glycogen from the liver. The same case at the Peter Bent Brigham Hospital actually showed this to be true, when the patient with a blood sugar of 46 mgms. had a basal respiratory quotient of .72. Eighty minutes after an intravenous injection of 100 gms. of glucose the blood sugar had risen to 97 mgms. and the respiratory quotient was raised to 1.12. While Cammidge[1] may argue that the fall of the blood sugar after the first hour is due to the failure of liver glycogen to rally to the rescue, the curves in one of our cases (Fig. 4: 3.7.33) carried out for six hours, shows a rise in the blood sugar from the third hour. We feel that this is conclusive proof that glycogen is rallying to the rescue after the glucose had apparently overstimulated the pancreas.

Other causes of hypoglycemia are, progressive muscular atrophy, Addison's disease, adrenal tumor, hypothyroidism, myasthenia gravis, hypopituitarism and status thymolymphaticus. These disorders are easily ruled out by appropriate tests.

Some authors have believed these attacks of spontaneous hypoglycemia to be due to a psychic origin. Henry and Mangam[7] have found a low type of sugar tolerance curve in cases of manic depressive excitement similar to those found in hyperinsulinism. Finney,[8] after resecting part of an apparently normal pancreas in a psychopathic patient without much relief of her symptoms, concluded that the attacks were of psychogenic origin.

Case 1: Hyperinsulinism, renal glycosuria, tetany, chronic cholecystitis with pericholecystic-duodenal adhesions, postoperative pancreatic abscess and right subdiaphragmatic abscess. One-third of the pancreas was resected without relief of her symptoms. The patient was a female, forty-one years of age, whose presenting complaints on July 29, 1931, were spells of dizziness and weakness occurring about one-half hour after eating accompanied by trembling, sometimes sweating and numbness over the entire body but especially in the legs. She felt compelled to lie down immediately and was unable to resist falling to sleep. Sometimes these spells were relieved by a cup of cocoa and sugar. She also had other spells of indigestion, gas and pain in the epigastrium radiating to the right shoulder blade. She was referred to me because sugar had been found in her urine but a sugar tolerance test (Fig. 4: 8.1.31) revealed an increased tolerance and renal glycosuria. Cammidge[1] has suggested that renal glycosuria is due to a calcium deficiency causing increased permeability of the kidneys to glucose. She was therefore investigated from this point of view. A positive Chvostek's sign was present and her Erb's reaction showed a markedly increased nerve muscle irritability with contraction present at only three milliamperes and tetanic contraction at four milliamperes. The blood serum calcium, however, was normal at 11.3 mgms. per 100 cc. Two years before she had had a severe attack of mumps with fever up to 104°, delirium, terrific epigastric pain and jaundice. It is interesting to conjecture whether she might not have had an acute cholecystitis and pancreatitis at this time for she dates her weak spells from this illness.

On physical examination there was a slight tenderness in the gallbladder region and visualization showed a bilocular shaped gallbladder of poor intensity which emptied and concentrated poorly. The metabolism test was a minus five per cent.

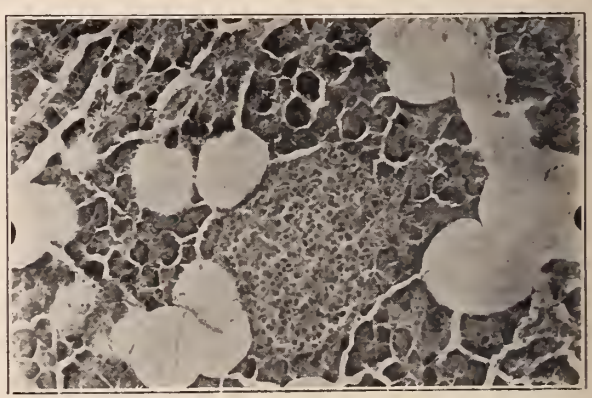


Fig. 3—Hyperplastic island—Infiltration of islet cells into interascinar stroma.

With a tentative diagnosis of hyperinsulinism, tetany, renal glycosuria and cholecystitis she was discharged on a bland diet with carbohydrate feedings between meals and large doses of calcium lactate and viosterol. When seen four months later she had gained twenty pounds and was much relieved of

her weak spells. However, the epigastric pain and dyspepsia had increased to such an extent during the last two months of this period that cholecystectomy seemed advisable, especially since at the same time we could carefully explore the pancreas for a possible adenoma of the islet tissue. This operation was performed February 6, 1932, and an adherent chronically inflamed gallbladder was removed. An opening was made in the gastro-colic ligament through which careful inspection and palpation of the pancreas revealed no tumor. Approximately one-third of the pancreas was removed from the tail toward the body. All bleeding points were tied separately; the raw stump of the pancreas was touched lightly with the cautery and then covered over with the sutured peritoneum, a hole being left for the insertion of a drainage tube down to the stump. The postoperative course was stormy due to a retroperitoneal abscess that burrowed across the spine behind the peritoneum to the right subdiaphragmatic region where it was demonstrated by the doming effect of the diaphragm as seen on a roentgenogram. This unusual course for the pus to take was due to the suturing over of the pancreatic stump by the peritoneum. After the abscess was evacuated convalescence was uneventful.

Pathology: The piece of pancreas measured 9x3x1½ cm. and weighed 32.5 grams. Grossly it presented no abnormality. Only eosin hematoxylin stained sections were prepared. Four pathologists pronounced a moderate but distinct hyperplasia of the islet tissue to be present and two voted the islet tissue to be within normal limits. However, there seemed to be a definite hyperplasia exhibited by "finger-like processes of islet tissue extending from the islets a short distance into the interascinar stroma." (Figs. 2 and 3.)

Further course: The first day postoperatively the fasting blood sugar was 157.4 mgms. dropping the third day to 108.1 mgms. When the patient was released six weeks after the operation her sugar tolerance test was normal (Fig. 4: 3.11.32). Three months after the pancreatic resection her old spells began to return and four months after operation her curve had again become distinctly that of the increased tolerance type (Fig. 4: 6.23.32). Chvostek's sign was still positive but the blood calcium remained normal at 9.8 mgms. She was again put on a high carbohydrate intake with calcium and viosterol, and gained twelve pounds on this diet, but the "weak, trembly spells" persisted. A sugar tolerance test was sure to produce them about five hours after the glucose lemonade. On this high carbohydrate intake after the loss of part of the pancreas, sugar was steadily found in her urine and she had a distinct diabetic type of curve (Fig. 4: 10.10.32). At the suggestion of Dr. Sevringhaus of the University of Wisconsin she was put on a high fat diet with 170 grams of fat. This amount was later increased to 260 grams. She enjoyed four months of comparative comfort on this regime, and the tolerance curve reverted to normal, although renal glycosuria still persisted (Fig. 4: 11.9.32). Menopausal symptoms intervened with a scanty flow every seventeen days and hot flashes, which were partially controlled by theelol. At the present writing she has discontinued her high fat diet and her sugar tolerance curve has again reverted to the hyperinsulinism type (Fig. 4: 3.7.33). Between the fourth and fifth hours she had her usual weak spell when the blood sugar fell to 67 mgms.

Discussion: This case offers many problems in the field of endocrinology. She is a hypersensitive, high-strung, neurotic type of woman. Does the vagus play a part in this woman who from many of her symptoms certainly has a "vegetative nervous system imbalance?" Britten[9] and LaBarre[10] have shown that stimulation of the right vagus nerve after the nerve supply, from the liver and adrenal glands had been severed, results in sugar tolerance curves similar to those obtained by the administration of insulin. They also state that there is much evidence histologically, of a rich

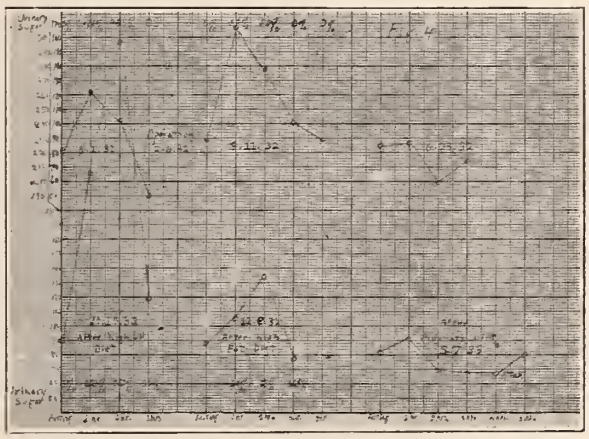


Fig. 4.

nerve supply to the islets. Allan, et al[11], on the other hand contend that "since atropine had no effect on the falling concentration of blood sugar in their case that more evidence cannot be brought forth to support this hypothesis."

What is the mechanism of the renal glycosuria in this case? Is it a case of dysinsulinism that will later develop true diabetes? What is the mechanism of the tetany-like factors of this case?

Cammidge[1] states that a low blood calcium (never demonstrated in this case) causes increased permeability of the kidneys to glucose. Does this loss of glucose lead to hypoglycemia in an individual with exhausted hepatic glycogenesis unable to synthesize glucose rapidly enough to meet the loss through the kidneys?

Harris' second case was much like the one under discussion, in that our patient too, had a low blood sugar curve (.085, .050, .050) and gly-

cosuria throughout the test. This patient controlled his hypoglycemia by taking food. In addition to the hyperinsulinism he was considered a potential diabetic and put on a low carbohydrate, high fat diet. As long as he remained on this diet he had no symptoms of hyperinsulinism but after a few years he became careless about his eating and began having more "hungry spells." Finding that he could prevent and get relief from them by eating, he kept chocolate bars in his pocket constantly and ate freely of them between meals.

Gammon[12] says that many authorities have found a tendency toward low blood sugar in cases of renal glycosuria (Jonas[13], Gibson and Larrimer[14]). Gammon goes on to say that usually the degree of depression is slight and no symptoms are associated. The sugar loss in the urine is apparently more responsible for excretion of large amounts of sugar and is not always associated with mild symptoms from the hypoglycemia occurring in Gibson's and Larrimer's[14] patients.

Certain of the fifty cases of mild hypoglycemia studied by Hoxie and Lisherness[15] were probably due to renal glycosuria.

How about the somewhat doubtful islet hypertrophy in this case? Is it secondary to other endocrine stimulation, to nervous impulses, or to the infectious insult of a mumps pancreatitis. Authorities for the actual existence of general hyperplasia of the islet tissue are as follows: Phillips[16] reports a case of hypoglycemia associated with hypertrophy of the islands of Langerhans. The average size of the islet cells was at least 50 per cent higher than normal. He concludes that the hypertrophy of the islands of Langerhans with increased insulin production was the etiologic factor of the hypoglycemia in this case. He also concludes that high sugar ingestion may provoke hypertrophy of the islands of Langerhans and bring about chronic hyperinsulinism. Phillips[16] quotes a case of Dubruil and Anderodias[17] of giant islands of Langerhans in a child of a diabetic mother. The islands were from twenty to thirty times larger than normal. He cites a case report by Gray and Feemster[18] of compensatory hypertrophy and hyperplasia of the islands of Langerhans in a child born of a diabetic mother. The premature child died on the third day of life and on that day its blood sugar was .067 per cent. Hyperplasia of the islands as a cause of hypoglycemia was considered by these authorities as compensatory. Harris[4] in his summary states that one of the causes of hypoglycemia may be a disturbance of the carbohydrate control through overproduction of insulin by hyperfunction, hypertrophy or tumor of the islets.

The rationale of a high fat diet in the management of hyperinsulinism is based on the fact that high carbohydrate intake may be insulting the islands to oversecretion and Harris[4] believes "it seems probable that one of the causes of hyperinsulinism is the excessive ingestion of glucose-forming foods and that as a result of overactivity induced by the overeating of carbohydrates, the islands of Langerhans become exhausted and hypo-insulinism (diabetes) follows. It is possible that the hunger incident to hyperinsulinism may be a cause of overeating, and, therefore, the obesity which so often precedes diabetes." He also concludes that a relatively low carbohydrate, moderate protein and high fat diet with feedings two or three times during the day, or at night, if necessary to prevent nocturnal attacks, will give relief from symptoms in most cases of hyperinsulinism. Walters[19] reports three cases of spontaneous hypoglycemia which were relieved by a low carbohydrate, high fat diet, with frequent feedings. Only 10 per cent of fat is broken down into glucose. It supplies energy more slowly and does not stimulate the overproduction of insulin in these functional cases.

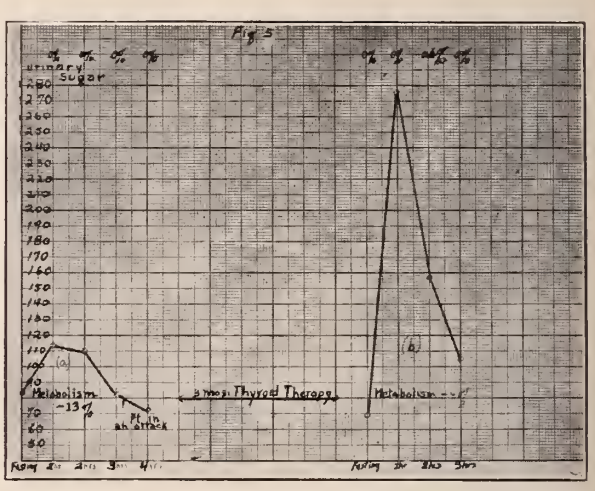


Fig. 5.

Case 2: Hypothyroidism, hyperinsulinism. The patient, a farmer, forty-seven years of age, complained of weak spells occurring chiefly when he had been working and "got a sweat up." He then felt shaky and weak, "things went black" and he "got so hungry the sweat came out on me." Many times he had to lie down in the field before he felt able to get back to the house for something to eat, which invariably gave him relief. He always felt like going to sleep with these spells, but had never lost consciousness. He had acquired the habit of taking bread or cookies into the field with him. The diagnosis of hypothyroidism was based on his frequent fatigability, inability to stand cold, paresthesias in his fingers, low blood pressure of 90/70 and a low metabolic rate—13 per cent in one test and 16 per cent in another.

He was seven pounds below his average weight. The physical examination was negative and he did not in any way present the picture of myxedema. His sugar tolerance test (Fig. 5a) showed an increased tolerance to carbohydrates. At the fourth hour when the blood sugar was 722 mgms., he had one of his typical attacks of weakness, hunger and sweating. We have previously observed the occurrence in some of these cases of hypoglycemic symptoms at a low normal level. Another one of our cases of hyperinsulinism associated with hypothyroidism had such an attack when the blood sugar was 80 mgms, although she also had other attacks, apparently no more severe, at a level of 50 mgms. (Fig. 6). Both this latter case and the case now under consideration had complete relief of symptoms on thyroid extract. After three months of such therapy he gained seven pounds and had no more attacks. The metabolism test rose to —4 per cent and the sugar tolerance test gave a normal response (Fig. 5b).

Case 3 (Fig. 6): Here we have a typical, low tolerance curve when the metabolism was —13 per cent. At a level of 50 mgms., she had an attack, almost collapsed and had to be taken from the laboratory to her room in a wheel-chair. This patient was a female, forty-nine years of age, who had recurrent spells of hunger, weakness, trembling and sweating for eight years. These spells were relieved by eating. When she had been on thyroid extract for eight weeks, her metabolism was increased to +18 per cent. The sugar curve went up and then dropped to 50. Evidently in spite of thyroid extract, a large insult of glucose can produce over-functioning of insulin and cause the blood sugar to drop. The dose of thyroid extract was reduced to one grain daily because of the high metabolic rate. At the end of seven months she had a practically normal type of curve and the spontaneous spells were very rare.

After about eight months of thyroid therapy, she gained sixteen pounds and considered herself entirely free of attacks. She was well and was working again. Her metabolism of +18 per cent was still a little high. The thyroid extract was withheld for two weeks, and her metabolism fell to —14 per cent. She was then put back on a grain a day, which is maintaining her in good balance and good health.

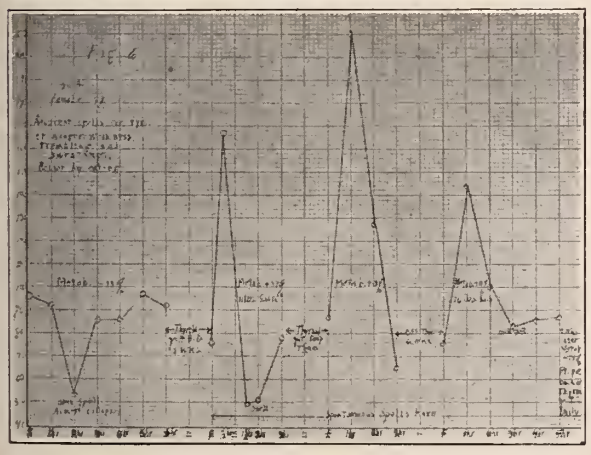


Fig. 6.

Discussion. Allan et al[11], comment: "Treatment with thyroid substance may counteract to some extent the action of the insulin since hyperthyroidism when associated with diabetes reduces the effectiveness of insulin." The therapeutic result of thyroid extract has been startling in these two cases. The antagonistic effect of the thyroid on insulin is well known, and cases of hypoglycemia following thyroidectomy and in myxedema and cretinism have long been recognized[20].

There are also the cases of so-called "occult hypothyroidism" where no pronounced objective signs of myxedema are present such as in these cases. All cases of suspected hyperinsulinism should be subjected to a metabolism test and if a low metabolism is present, thyroid therapy should be given a trial.

Conclusions: The greatest difficulty in these cases is to decide whether a case is surgical or medical. In our opinion it is absolutely impossible to be sure before operation whether a patient has an islet adenoma or a carcinoma. Graham and Womack[21] state that there are now seven successfully operated cases of islet tumor, not all of which have been reported.*

The case just reported makes the eighth one in which a tumor was not found at operation. At least five of these had part of the pancreas resected, but in only one of these (that of Harris and Taylor mentioned by Graham and Womack) was there any permanent benefit. By analogy with subtotal thyroidectomy in hyperthyroidism, perhaps no good effect could be expected unless most of the pancreas was removed, which is an impossibility.

Our criteria to justify exploration for islet tumor would be:

1. Severe typical attacks grave enough to produce unconsciousness, epilepsy, amnesia or mental confusion during which a blood sugar of fifty or below could be demonstrated.

2. A sugar tolerance test showing markedly increased tolerance and a curve where the stimulating effect of glucose on the pancreas is demonstrated by the production of an attack two to six hours after the ingestion of the glucose.

3. Ruling out of:
   a. Occult hypothyroidism
   b. Myxedema
   c. Adrenal tumor
   d. Pituitary disease
   e. Progressive muscular atrophy.

*Dr. Frances Newton's unreported case makes eight cases of successfully operated islet tumor.

f. Advanced liver damage by carcinoma or poisons
g. Renal glycosuria

Concerning the true differentiation between cases of hypoglycemia due to tumor and those in which the pancreas seems morphologically normal, Gammon[12] states "All that can be said is there is perhaps a tendency for the disease to be more rapid in its development, more severe in its manifestations, more erratic in behavior and more likely to cause death when tumor is present than in functional hypertrophy of the islands. No differentiation between adenoma and carcinoma seems possible unless there is evidence of metastases. There are insufficient reports of hypoglycemia from diffuse hypertrophy of the islands to attempt differentiation from the other types."

If the case is to be handled medically, a high fat diet with feedings between meals seems the most rational regime. Thyroid extract should be tried if the metabolism is low. Cases of psychogenic origin will offer the greatest difficulty.

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Discussion

Dr. Edwin B. Winnett, Des Moines: Along with myxedema it seems to me that there is another disease for which we should have a sign in our offices and that is hyperinsulinism, so that we will not fail to recognize the disease because of its rarity. To fix the possibility of the disease in our minds we must watch for an insulin reaction in a patient who does not take insulin. Most of us have treated enough diabetics to know that the typical insulin reaction begins with hunger, nervousness, sweating, double vision, weakness and later, convulsions.

However, anyone who has treated many cases of diabetes knows that the textbook signs and symptoms do not always occur. Patients who take an overdose of insulin will be found to be unconscious without any premonition whatever. They do not have time to take anything to combat the hypoglycemia. Other patients taking insulin have the symptoms of an acute drunk and we have all seen this condition. One of my patients who was driving an automobile down the street landed in the police station. Therefore, if patients who are taking insulin may have such varied signs and symptoms of an overdose of insulin, surely the patient with too much insulin in his system from his own pancreas, may have an insulin reaction of just as many different forms and symptoms. In the case of hyperinsulinism the excess insulin may be from a tumor of the pancreas, a failure of the liver to properly throw glucose into the blood stream, from a disease of the hypophysis or from some other cause. An insulin reaction may occur from any of these causes and may occur in any degree. A blood sugar determination will decide for us whether or not we are dealing with a patient with hyperinsulinism. This is a difficult job, especially if the patient is in the convulsive stage, because a blood sugar determination takes time. Most patients or the patients' parents have found early in the disease that sugar or some form of available carbohydrates will quickly relieve the condition, and in most cases sugar has been given them before a blood sugar test can be made.

In my experience with a child four years old, the mother could not be persuaded to wait until the blood sugar determination could be made. Usually an hour later the blood sugar is about up to normal.

Since the description of hyperinsulinism by Searle Harris in 1925 many hitherto undiagnosed conditions have been diagnosed, among them neurasthenia, hysteria and epilepsy. Many patients with epilepsy will be properly diagnosed as having hyperinsulinism after we have had the sign in our office long enough to keep this condition constantly before us.

With regard to the high or low fat diet in the treatment of hyperinsulinism or the high fat diet in the treatment of diabetes, I must say that I have had no experience in treating hyperinsulinism with a high fat diet. However, it does seem to me to be the rational treatment of these cases since the stimulation of the pancreatic island cell will be at a minimum with fat foods. However, the treatment must be guided by the causative factor and for this reason may, at times, be entirely surgical. I feel that we are deeply indebted to Dr. Evans for explaining this condition to us, and wish we could have it brought to our attention more frequently.

SUMMARY OF AFTERNOON'S SYMPOSIUM BY MEDICAL GUEST

David P. Barr, M.D., St. Louis

The communications of this afternoon's program have been almost entirely concerned with the glands of internal secretion. We have heard discussions of thyrotoxicosis by Dr. Plummer and by Dr. Thornton; an excellent presentation of the question of hypothyroidism by Dr. Baldridge; and a most interesting review of hyperinsulinism by Dr. Evans. We have learned also about placentas and have to remember that the placenta, although not necessarily placenta praevia, has in these days an important endocrine function. From this program the most obvious inference is that the endocrine glands are of great importance in the present practice of medicine. A few years ago a man who dared to call himself an endocrinologist was exposed to the risk of ridicule and might be advised by his best friends to consult a psychiatrist. Today none of us who are clinicians can afford not to be endocrinologists. More and more the rapidly increasing knowledge of the glands of internal secretion is modifying our understanding of disease.

In considering this subject it is important to recognize the intimate relationships which exist between the various endocrine glands. A few examples may be cited.

In thyrotoxicosis it is obvious that the thyroid gland has undergone pathologic changes, but it is almost certain in many cases that this disturbance is not primary. The factors controlling it are incompletely understood, but we know now that in experimental animals a condition resembling thyrotoxicosis may be produced by the use of pituitary hormones.

Recently an interesting series of experiments has been performed by Dr. Anderson, who is working in Collip's laboratory. Loeb, as you remember, had been able to produce thyrotoxicosis in guinea pigs by injecting extracts of the anterior lobe of the pituitary gland. This he was unable to do in rats. Anderson's problem was to cause thyrotoxicosis in rats. Using one of the earlier and more impure extracts of the hypophysis, she worked for many months without success until one summer day she took a preparation out of the ice box, injected it into several rats and found thyrotoxicosis in every animal. On re-examination of the extract she found that it had become infected. Thereafter, when she introduced certain organisms into the hormone, she was able to produce hyperthyroidism with considerable regularity. This seems to have an important bearing on the possible etiology of some cases of Graves' disease and may indicate that in the presence of an infection the pituitary gland plays a role in its production.

Hypothyroidism may not always be primary in the thyroid gland or due to destruction of thyroid tissue. In hypophysectomized animals one observes a resting phase of the thyroid gland which in animals may be corrected by appropriate pituitary extracts. In Simmonds' disease also it has been possible by means of the thyrotropic hormone of the pituitary to cause return of low basal rates to normal.

In Dr. Evan's review of hypoglycemia he has mentioned that it may be caused by pancreatic island tumors, by destruction of the liver, or by a temporary or continuous lack of glycogen in the liver. Insulin sensitiveness and hypoglycemia may be caused by hypophysectomy, while pituitary extracts may cause conditions simulating diabetes. Recently Wilder, a German, has reported two cases of pituitary tumors associated with marked symptoms of hypoglycemia. Very interesting in this connection is a recent communication concerning glycogen disease in children who die with large livers and symptoms of hypoglycemia. In two such cases the liver was found to contain 50 per cent of glycogen, to be compared with a normal glycogen content of less than 10 per cent. Such instances illustrative of the complexity and consequences of endocrine diseases could be multiplied indefinitely.

Before ending these brief and scattered remarks I should like to tell you how very much I appreciate your invitation to this meeting. It has been a great pleasure to see you, to witness your enthusiasm and to glimpse the excellence of the medical profession of the state of Iowa.

POLIOMYELITIS*

Lee F. Hill, M.D., and Dennis H. Kelly, M.D.
Des Moines

The literature during the last quarter of a century contains an abundance of articles on poliomyelitis, and it is our impression that such articles are more numerous in the latter part of this period than in the first part. One gains the impression that the hounds are closing in on the prey and that all are desirous of being in at the kill. So varied and so opposed are many of the opinions advanced, however, that it may yet be a considerable time before poliomyelitis can be considered as one of the contagious diseases, which has been brought under the control of mankind.

It is our purpose in this paper to discuss very briefly the present status of some of the high points concerning this disease.

*From the pediatric department of the Iowa Methodist Hospital.

The present wave of interest apparently had its origin in the years of 1909 and 1910 with the publication of articles by Landsteiner and Popper in Germany and by Flexner and Lewis[1] in this country in which the successful production of poliomyelitis in monkeys was reported. The former authors were the first to accomplish this feat. They inoculated a suitable preparation of spinal cord fluid taken from a fatal case of a human being, into the peritoneal cavity of three monkeys. Two of the animals developed the disease. Landsteiner and Popper were unable, however, to infect other monkeys from these. Flexner and Lewis on the other hand were able to pass the disease from monkey to monkey in relatively large numbers. Practically all other animals have proved particularly resistant to infection so that at the present time the monkey is necessary as the experimental laboratory animal. This fact has greatly hampered progress in research because of the expense involved and other obvious difficulties.

In 1910 Flexner and Lewis made a further contribution to the then existant knowledge by establishing the etiologic agent of poliomyelitis as a virus, a view which still holds to this day. It is to be expected that many observers would report the findings of micro-organisms in connection with the disease but all such reports have failed of substantiation. Rosenow's pleomorphic streptococcus and Flexner's globoid bodies are outstanding examples. Recently Eberson[2] of San Francisco has reported the cultivation, on special culture medium, of an organism from the filtrate of virus containing cord and brain passed through a Berkefeld filter. The organism becomes visible when grown in the culture medium but is invisible in the filtrate. Inoculations into monkeys from the sixth and thirteenth supplants produced poliomyelitis, and the organism was again recovered from these animals. Confirmation of this work is as yet lacking.

Much interest and much controversy has arisen over the route traversed by the virus in its attack upon the human being. It was early determined that the virus in active cases of poliomyelitis and in healthy carriers could be recovered with considerable frequency from the nose and throat. Its method of progress from this point was assumed by some to be by the blood stream, through the choroid plexus into the circulating spinal fluid thus producing a meningitis first, and thence to the spinal cord. Others believed that the virus entered the central nervous system through the cribriform plate in the roof of the nose by way of the lymphatics and so reached the cerebrospinal fluid. One group advanced the theory that infection of the cord was possible by way of the intestinal tract, since it was observed that nearly 80 per cent of the paralyses involved the legs. The general concensus, however, seemed to be that infection of the cord was secondary to, and dependent upon, a primary meningitis, a view expressed as recently as 1928 by Amoss. That this view is not correct has been shown by Fairbrother and Hurst[3] in most convincing experimental evidence. They inoculated a series of monkeys intracerebrally and intranasally, and sacrificed them on successive days. Spread of the virus from the original point of inoculation was studied in two ways—first, by inoculation tests for the presence of virus, and second, by histologic examination. Their conclusions are worth quoting.

1. After intranasal and intracerebral inoculation in monkeys, poliomyelitis spreads histologically from above downwards, the various levels of the cord becoming involved more or less simultaneously. Owing to the greater individual susceptibility of the anterior horn cells, and particularly those of the lumbar region, paralysis usually appears, and later becomes complete, first in the legs; the clinical findings are thus no guide to the path of entry or manner of spread and development of the disease.

2. Spread of the infection to the brain stem and cord occurs by way of the axis cylinders and this appears to be the route usually taken to other parts of the central nervous system; meningeal spread is, however, possible and probably always plays some part in the local dissemination of the infection around the site of inoculation.

3. Meningitis is therefore not the primary lesion of the disease, which begins as a primary degeneration of nerve cells accompanied by inflammation in the interstitial tissues.

4. Virus is present in greatest amount in those regions in which nerve cell degeneration is particularly severe, that is to say in the spinal cord and brain stem; where nerve cell degeneration is slight, as in the cerebral cortex, in spite of the existence of numerous foci of inflammation, the virus is found inconstantly.

5. The cerebral cortex is not a favorable site for survival of the virus which tends within a few days to disappear altogether from the site of inoculation.

6. If the virus travels chiefly by way of the axis cylinders, its appearance in the cerebrospinal fluid would not be expected, nor, in fact is it found there except on rare occasions.

Jungeblut[4] confirmed the conclusions of Fairbrother and Hurst with further experimental data. He tied off the cord in one monkey and severed it in another above the lumbar region. He then in-

oculated the monkeys intracerebrally with virus. Since the lumbar cord did not become involved he concluded that the virus did not spread through the spinal fluid.

The epidemiology of the disease forms a most interesting chapter in the history of poliomyelitis. It is, and has been, provocative of a great deal of discussion among those who have made a special study of the subject. Several significant facts seem fairly well established. Among these may be mentioned that poliomyelitis exhibits a predilection for children between the ages of one and five; that from puberty on, a high degree of immunity exists among the general population, and that this immunity is greater in urban than in rural populations. Furthermore, it is admittedly established that the proportion of immunes is too great to be accounted for by the disease itself, as is the case in measles; nor would the addition of possible abortive or non-paralytic cases be sufficient to explain the discrepancy. Aycock[5], Flexner and others advance the theory that this widespread immunity among the adult population amounting to approximately 80 per cent is due to a sub-clinical carrier state, and compare it to what is known to occur in diphtheria. Jungeblut[6] takes exception to this explanation and raises the objection that it does not adequately account for the fact that the blood of adult residents in China, Greenland and other out-of-the-way places where poliomyelitis does not exist, has been shown to contain neutralizing properties for the poliomyelitis virus. His explanation is that immunity is coincident with maturation and is in some way related to the endocrine functions. Young monkeys were found to lack neutralizing virus substance, while mature monkeys possessed it. Most writers are inclined to agree with the Aycock and Flexner group, and regard poliomyelitis as a definitely contagious disease, but one in which the degree of contagiousness is very low. They believe that its epidemiology is based upon carriers, with here and there a break occurring in the individual's defense mechanism with resulting disease. It is worthwhile pointing out here that even in severe epidemics such as existed in New York in 1916, the chance of a child acquiring the disease is only about one in two thousand, a fact which should be of consolation to worried parents.

Some thought has been given to the factors which keep an individual from, or cause him to, develop poliomyelitis upon the initial exposure. Concerning this Aycock says: "It would appear that, while immunity from previous exposure may have a bearing on the protection of older persons against the disease, some other form of resistance inherent in the host is the factor that determines the outcome of a person's initial exposure to the virus. This form of resistance is to be distinguished from immunity, a form of resistance

Fig. 1. Summary of cases of poliomyelitis in Iowa from 1924 to 1931. Published through the courtesy of the Iowa State Department of Health.

Year		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1924	Cases	1	0	1	2	1	0	0	3	39	8	6	4	65
	Deaths	0	0	0	0	0	0	1	2	3	4	0	2	12
1925	Cases	0	0	0	2	1	0	8	24	61	59	16	5	176
	Deaths	2	0	1	0	1	0	3	9	14	5	3	1	39
1926	Cases	0	3	0	0	1	3	0	2	8	1	1	0	19
	Deaths	0	1	1	2	2	0	4	3	1	0	2	0	16
1927	Cases	2	1	0	0	1	0	1	9	28	36	17	14	109
	Deaths	0	0	2	1	0	0	0	2	12	6	3	2	28
1928	Cases	6	0	0	0	0	0	2	8	11	4	5	1	37
	Deaths	0	2	0	2	2	0	0	1	5	0	1	3	16
1929	Cases	2	2	1	5	1	4	1	4	17	26	8	5	76
	Deaths	4	0	3	1	0	1	1	2	3	3	2	3	23
1930	Cases	0	0	0	1	0	0	9	16	85	73	26	12	222
	Deaths	1	0	0	0	0	0	0	3	13	8	4	2	31
1931	Cases	7	1	3	1	0	1	2	25	34	44	37	12	167
	Deaths	0	0	1	1	1	1	2	4	7	6	5	?	28
Total	Cases	18	7	5	11	5	8	23	91	283	251	116	53	871
	Deaths	7	3	8	7	6	2	11	26	58	32	20	13	193
8 yr.	Cases	1.5	0.9	0.3	1.4	0.7	1.0	3.0	9.4	35.4	29.4	11.0	6.0	100.0
%	Deaths	4.2	1.8	4.2	3.6	3.0	0.6	5.4	13.2	30.9	15.7	9.0	8.4	100.0

Fig. 2.
NON-PARALYTIC

Patient	Duration Illness	Fever	Stiff Neck	Spinal Fluid Cell Count	Serum	Temp. Normal
K. B.	12 hrs.	101	+	1 56 2 44 3 51 4 56	60 c.c.	13 days
W. R.	24 hrs.	101	+	1 206 2 134 3 ?	60 c.c.	4 days
E. P.	24 hrs.	101	+	1 150 2 154 3 104	50 c.c.	4 days
C.H.	36 hrs.	102	+	1 58 2 54 3 49 4 5	40 c.c.	3 days
L. E.	24 hrs.	102	+	1 262 2 305 3 ?	60 c.c.	4 days
C. C.	5 days	101	+	1 96 2 61 3 76 4 91 5 0	80 c.c.	4 days
B. B.	48 hrs	102	+	1 49 2 81 3 ?	60 c.c.	2 days
J.	48 hrs.	103	+	1 80 2 40 3 ?	40 c.c.	2 days
J. S.	24 hrs.		+	1 82 2 72	100 c.c.	3 days
B. A.	36 hrs.		+	1 23 2 35	60 c.c.	6 days
E. A.	36 hrs.		+	1 71 2 47 3 47	60 c.c.	4 days
B. D.	36 hrs.		+	1 57 2 46 3 8	60 c.c	6 days

resulting from exposure to the virus, and I have suggested that it be designated by the term "autarcesis" (to defend self). While the cause of the autarcelogy of poliomyelitis remains unknown there is some suggestion as to its nature." He goes on to point out the various theories that have been held, such as fluctuation of physiologic function in conformity with climatic and seasonal variation, endocrinology, hereditary factors, local resistance rather than general resistance, as suggested by the occurrence of poliomyelitis following tonsillectomy. Amoss found that the nasal secretions had a definite inhibitory effect upon the virus. It has also been suggested by some, and denied by others, that immunity to poliomyelitis may have some relation to one's blood group. In two series of cases where blood group determinations were made no cases were found in blood group I.

From the foregoing discussion it can readily be understood that no satisfactory basis for epidemiologic control of poliomyelitis exists. If the theory is correct, that the spread of the disease during an epidemic is by healthy carriers of the virus and that a large proportion of the population serve as a reservoir for the virus, then the mere isolation of an occasionally diseased individual is but a drop in the bucket. The detection of carriers or those lacking immunity can be accomplished only on a very limited scale, since such information can be secured only through monkey inoculations.

It is not surprising, therefore, that experimentation has been along the lines of developing some sort of a test, comparable to the Schick test, for detecting immunity and susceptibility, and some attempt made to devise a means of producing an active immunity comparable to toxin-antitoxin or toxoid.

Jungeblut has reported the results of a skin test on a group of children, but has been unable to reach any definite conclusion. Rhoads mixed neutralizing serum with virus and was successful in immunizing some, but not all monkeys. Recently he has mixed virus with aluminum hydroxide and finds that the absorbed virus becomes innocuous even when injected intracerebrally.

As Schultz points out it is probable that no satisfactory solution to the poliomyelitis problem is likely to result until further experimentation in these fields provide the answer.

From the clinical point of view considerable interest has been aroused in recent years, and is being increasingly popularized, because of the knowledge that poliomyelitis can be recognized in the preparalytic phase.

Wickman in 1905 from his studies of several Swedish epidemics was the first to refer to a preparalytic stage of the disease. It seems strange that it should have taken so long for the significance of this observation to percolate through the general medical profession. Even now we believe that many physicians think of poliomyelitis as a paralytic disease rather than a systemic disease. Preparalysis is to poliomyelitis what acute appendicitis is to peritonitis. Beginning with the poliomyelitis season the physician should always have this disease in mind when he sees a patient with signs of an acute infection. Headache, fever and vomiting are the outstanding symptoms. When these symptoms are combined with a slight rigidity of the neck, the physician is justified in making a spinal puncture, and is open to criticism if he does not, for in the great majority of cases the diagnosis of poliomyelitis in the preparalytic stage rests upon the cell count in the spinal fluid. Normally the spinal fluid contains no cells or never more than ten. In poliomyelitis the cell count ranges from ten to five hundred. Early in the disease polynuclears predominate, while lymphocytes predominate during the later stages.

Levinson[7] has reported a few cases in which

Fig. 3.
SPINAL TYPE

Patient	Duration Disease	Paralysis Admission	Fever	Stiff Neck	Spinal Fluid Cell Count	Extension Paralysis	Temp. Normal	Result on Discharge	Serum
B. C.	72 hrs.	Pain L. Thigh	101	+	1.186 2.dry 3.125 4.147 5.74	Legs	6 days	L. Leg complete R. Leg Partial After 2 yrs. L. Foot drop Only	110 c.c
D. H.	72 hrs.	L. Leg L. Shoulder	100	+	1.50 2.48 3.24 4.16	None	7 days	Same	45 c.c.
R. N.	120 hrs.	Weakness L. Leg Pain both legs	100	+	1.41 2.52	None	2 days	Contracture Both Legs	60 c.c.
J. T.	?	L. Leg	101	+	1.137 2.220 3.146 4.71 5.7	L. Leg Back Muscles	4 days	P. L. Leg P. Back Muscles	20 c.c.
D. E.	168 hrs.	Arms, legs, neck, back	101	+	1.180 2.51	None	4 days	Same	0
J. S.	72 hrs.	None	102	+	1.125 2.63 3.73 4.59 5.53	L. Deltoid L. Leg Partial R. Leg	3 days	Slight Improv. in Arm	60 c.c.
F. C.	72 hrs.	L. Leg	101	+	1.245 2.240 3.19	No Increase	4 days	Slight improv.	40 c.c.
B.	96 hrs.	Both Legs	101	+	1.120 2. ? 3. ?	No Increase	4 days	Same	40 c.c.

he found a normal spinal fluid. This is to be explained on the basis, as pointed out earlier, that cord changes come first, and meningitis second, in poliomyelitis. One should not exclude preparaiytic poliomyelitis then, even with a negative spinal fluid, if other confirmatory symptoms point to that diagnosis.

In addition to those signs and symptoms already mentioned, there may be others present. The so-called dromedary type of onset has not impressed us as being very constant or of much value. Some authors feel that the "spine sign" is of more significance than the stiff neck. We have not found this to be true in our experience. Muscle tenderness, soreness and tremor may or may not be present.

Finally there remains to be discussed only the treatment of poliomyelitis with particular reference to convalescent serum or serum possessing policidal power. The various paralytic forms of the disease will not be included, because after paralysis is established the diagnosis usually presents no difficulties, and specific treatment is admitted by all to be of little value. It should be emphasized, however, that the physician who neglects the application of orthopedic appliances to overcome the deforming pull of non-paralyzed muscles from the very onset of paralysis is guilty of gross neglect.

Shortly after the experimental production of poliomyelitis in monkeys, it was found that the blood serum of monkeys recovering from an attack of the disease possessed neutralizing power for virus. It was soon discovered that the convalescent serum of human beings also possessed this neutralizing power, and in more recent years it has been determined that about three-fourths of the adult population have blood sera capable of neutralizing virus when injected intracerebrally into monkeys. Upon the establishment of these facts rests the present-day use of convalescent serum, adult serum, and transfusions in the treatment of poliomyelitis in man.

At the present time it must be admitted that there is no experimental or clinical proof that this method of treatment is of any value whatsoever. In fact, the available experimental evidence rather points to the fact that it is of no value.

William Park[8], of New York City, reported his experiences with convalescent serum in the 1931 epidemic in New York. Pooled serum of proved neutralizing power was used. Of 408 preparalytic cases untreated and serving as controls, 73.7 per cent remained unparalyzed at the end of three weeks, 14.2 per cent showed some muscle weakness, and .9 per cent had died. Of 519 patients treated with convalescent serum 68.8 per cent remained unparalyzed at the end of three weeks, 7.7 per cent showed muscle weakness, and 3.8 per cent had died. Aycock and Kramer[9] reported similar results in a smaller series of cases observed in Massachusetts.

Fig. 4.
BULBAR TYPE

Patient	Duration Disease	Paralysis Admission	Fever	Stiff Neck	Spinal Fluid Cell Count	Extension Paralysis	Temp. Normal	Result on Discharge	Serum
W. W.	72 hrs.	R. Palate	100	+	1. 66 2. 22	None	2 days	No Change	50 c.c.
R. C.	168 hrs.	R. Facial Palate	101	+	1. 83 2. 46 3. 5	None	5 days	R Facial Swallow Soft Foods	60 c.c.
L. W.	48 hrs.	L. Plate	102	+	1. 42 2. 68 3. 121 4. 124	Swallowing Enceph.	7 days	Improv. Swallowing Clear Mentally	120 c.c
R. A.	36 hrs.	R. Palate Swallowing 24 hours	102	+	1. 82 2. 44 3. 3	Spasticity Legs	7 days	Improv. Swallowing Spastic P. L. Leg	80 c.c
W. D.	7 days	Palate Swallowing Cerebral	103	+	1. 81 2. ? 3. ?	Facial	8 days	Spastic Legs Improv. in Swallowing	60 c.c
C. S.	48 hrs.	Loss of Voice	100	+	1. 201 2. 77	Contract Legs	4 days	Talking Legs Improved	40 c.c
T. A.	24 hrs.	Palate Swallowing	100	+	1. 113 2. 50 3. 60	None	6 days	Swallowing	60 c.c
R. G.	48 hrs	Palate Swallowing	104	+	1. 259 2. 100 3. 103	None	5 days	Swallowing	60 c.c
R. Gr.	48 hrs.	L. Facial	100	+	1. 11 2. ?	None	3 days	Same	40 c.c
C. R.	72 hrs.	R. Facial	100	+	1. ?	None	5 days	Same	30 c.c
Q. J.	72 hrs.	Palate Swallowing	103	+	1. 190	Resp. Muscles	5 days	Palate Immobile	60 c.c
M. T.	72 hrs.	L. Palate	100	+	1. 66 2. 22	None	3 days	Palate Paralysis Same	50 c.c
J. M	72 hrs.	Coma Swallowing	103	+	1. 212			Deceased 12 hours	20 c.c
B. B.	72 hrs.	Diplopia Neck Shoulder	103	+	1. 164 2. 157 3. ? 4. ?	Arms Neck Cerebral		Deceased 8th day	80 c.c
R.	24 hrs.	Coma Cerebral	105	+	1. 200			Deceased 12 hours	20 c.c

The argument for the use of serum seems to rest on the opinion of a large number of men who have used the serum in all their cases but have not observed the results in an equal number of untreated cases. There does not seem to be any better agreement upon the route of injection of the serum. Many authors stress the importance of the intraspinal and intravenous routes, but the statistics of their cases show no improvement over those from workers who have confined their use of the serum to the intramuscular route. Undoubtedly further experimental work will have to be carried on before any decision can be reached. In the meantime, however, lacking any other means of treatment and for the peace of mind of our patients, it seems to us that we should continue the use of convalescent serum whenever we can get it, or adult serum if the former is not available.

In the last three years thirty-five cases of poliomyelitis in various stages of the disease have come under our observation. Fifteen of the series were of the bulbar type, and three in this group died. Eight cases were of the ordinary spinal type with paralysis already established when first seen. Serum was administered intramuscularly in all but one of these twenty-three patients, but with no effect, as far as we were able to determine. Twelve children with preparalytic, non-paralytic, or abortive, poliomyelitis were seen. We use these terms advisedly because it is impossible for us to say what would have happened in any of them had treatment not been instituted. Spinal drainage was repeated daily in each case until convalescence was established, and serum was given in every case by the intramuscular route only. We have no data on the policidal power of the serum used. Suffice it to say that all of these patients recovered without paralysis, a result which could hardly be bettered by the advocates of intraspinal or intravenous serum administration, and certainly accomplished with less risk of serious accident to the patient. Whether the credit for the recovery of these patients is due to serum, to spinal drainage,

or to both, or whether they would have recovered equally well without the treatment, we have not the temerity to say; but until definite proof is offered one way or another, we feel compelled to continue with a method which gives such satisfactory results.

Fig. 6.
SUMMARY OF CASES

Non-Paralytic	12
Spinal Type	8
Bulbar Type	15
Deaths	3
Total Mortality Per Cent	8.0%
Mortality Non-Paralytic	0.0%
Mortality Spinal Type	0.0%
Mortality Bulbar Type	20.0%

CONCLUSIONS

1. Poliomyelitis is a virus disease which can be experimentally produced in monkeys.

2. Spread of the virus in the individual is by way of the axis cylinders rather than by the cerebrospinal fluid.

3. Epidemiologically, the virus spreads to a large number of persons by means of carriers with only here and there a break through the defense mechanism.

4. As yet there is no practical means of selecting immunes from susceptibles, or of producing an active immunity.

5. Poliomyelitis can be recognized in the preparalytic stage.

6. The therapeutic value of convalescent serum is yet to be proved.

7. Thirty-five cases of poliomyelitis occurring in the authors' practice are given and the results with convalescent serum tabulated.

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HERNIA OF THE ILEUM THROUGH AN APERTURE IN THE MESENTERY*

Case Report and Review of Literature

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Strangulation of loops of the intestine through congenital or acquired openings in the mesentery is a very uncommon condition. It is for this reason that the following case is added to those already reported in the literature.

CASE REPORT

Chief Complaint: The patient, a white man, fifty-nine years of age, was admitted to St. Joseph's Mercy Hospital, February 10, 1933, with a complaint of intense epigastric pain, and the following history was given:

Family History: Irrelevant.

Past History: Eighteen months ago he had an attack similar to the present one. It lasted two hours, after which he obtained complete and permanent relief. During the past six months he has been subject to severe frontal headaches and dizzy spells. There has been no gastric distress and his bowels have been regular.

Present Illness: Twelve hours before admission to the hospital, the patient had a sudden attack of severe epigastric pain. When first seen he was very cyanotic, had a rapid pulse and was in moderate shock. He was nauseated but did not vomit. His blood pressure was 200 systolic and 120 diastolic. At that time the attack suggested coronary thrombosis. He was seen again six hours later and he continued to suffer from excruciating pain in spite of opiates. He was still nauseated but was unable to vomit. An enema at that time produced fair results. His blood pressure was 160/100.

Physical Examination: On admission the patient, who was a medium sized man, was in severe shock. He complained of air hunger, was cyanotic and his skin was cold and clammy. The pulse was weak, thready and irregular. The chest examination was negative. The abdomen was slightly distended and there was slight muscle spasm over the lower half. There was generalized tenderness, but no masses could be felt. The blood pressure was 100/80; the temperature was 96.4° (axillary); the pulse was 102 and the respirations were 26 per minute. Shortly after admission he had small emesis of dark green fluid. A colon tube was inserted but without results. His white blood count was 16,000, of which 78 per cent were polymorphonuclear leukocytes.

Differential Diagnosis: Acute appendicitis, perforated gastric ulcer and renal calculus were considered as possible diagnoses. They were ruled out because the pain and the shock were too intense, because the abdomen was soft and lacked signs of peri-

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tonitis, and because the urine was essentially negative, respectively. Coronary thrombosis which was suspected at the start was eliminated because of the regularity of the heart. Furthermore the signs gradually became more definitely localized in the abdomen. The steady fall in blood pressure was attributed to shock. Two other diagnoses seriously considered were acute hemorrhagic pancreatitis, and mesenteric thrombosis. Even though no definite diagnosis could be made we felt that an operation was imperative but the patient's condition prohibited it. Treatment for the surgical shock brought about only slight improvement. During the night he had two emeses of 200 cc. of dark green fluid. The next morning (eight hours later) the temperature was 96.8°, the pulse was 126, and the repirations were 26 per minute. The pulse had become weak and irregular. Ten hours after admission in spite of the fact that the patient had shown no great improvement it was decided to operate under spinal anesthesia. However, when the patient was removed to the operating room he collapsed and it was necessary to return him to his room. He failed progressively and died thirty-eight hours after the onset of symptoms.

Clinical Diagnosis: Question of acute hemorrhagic pancreatitis or mesenteric thrombosis.

Necropsy Report: The necropsy was performed ten hours after death. The exterior of the body was unremarkable except for a slight fullness of the lower half of the abdomen which seemed to contain fluid. The peritoneal cavity contained 750 cc. of bloody fluid. A twisted mass of ileum estimated to measure 90 cm. in length was found to have passed through a round or oval opening in the mesentery.



Fig. 1. The strangulated loops are seen from behind the mesentery.

This opening was situated approximately 12 cm. from the ileocecal junction and measured 3 cm. in diameter. The edges of the aperture were smooth. The strangulated loops of intestine were dull, dark red in color and were distended with gas and a large amount of fluid and clotted blood (Figs. 1 and 2). The color of the intestine was due partly to the intense congestion and partly to the hemorrhages into the wall and the lumen of the intestine. The dull appearance was due to early gangrene. The mesenteric arteries and veins which supplied the strangulated portion of the intestine contained recent thrombi. The lungs showed numerous small hemorrhagic infarcts. Aside from the effects of arteriosclerosis the appearance of the heart, blood vessels, and kidneys was unremarkable. The routine examination of the other viscera showed nothing of importance.

Anatomical Diagnosis: Strangulated hernia of the ileum through a congenital opening in the mesentery; thrombosis of the terminal branches of the mesenteric arteries and veins; hemorrhages and gangrene of the intestine; peritoneal hemorrhage; multiple pulmonary infarcts; arteriosclerosis.

COMMENT

A review of the literature shows that the reported cases of intestinal obstruction due to the intestines slipping through an opening in the mesentery are rare. When Gibson[1] in 1900 made a statistical study of one thousand patients who had been operated upon for acute intestinal obstruction, he found that only ten cases were caused by such openings. Brown[2] in 1920, reviewing the literature for the previous twenty-five years, reported nineteen cases. Cutler[3] in 1925 reported eight additional cases from the literature and added one of his own. We have found only eight more cases reported in the past eight years; Elston[4], 1926; McWorther[5], 1928; Judd[6], 1929; and Turel[7], 1932, reported one case each; Edwards[8], 1932 and McIver[9], 1932, reported two cases each. With our case the total number of reported cases to date is thirty-six. In thirty-four of the cases the small intestine had become incarcerated. Hamaker[10] reported one case in a man 72 years of age in which the transverse colon and the omentum were strangulated through an opening in the upper part of the mesentery. Judd[6] reported a second case in a boy of ten years of age in which the colon and the terminal portion of the ileum had passed through an opening near the center of the mesentery of the small intestine. Those are the only two instances in which the large intestine was involved.

The openings may occur in any part of the mesentery but are found most frequently in the lowest portion near the ileocecal junction. They may be slit-like, but usually are round, and they vary

in diameter between one and four centimeters. In most instances the edges of the openings are smooth. In the majority of cases there is one opening; rarely there may be several. Cutler[3] states that the length of intestine which may be strangulated varies between a small knuckle and four feet.

ETIOLOGY

Trauma, inflammation and congenital defect are the three causes usually given for openings in the mesentery. It is obvious that direct violence to the abdomen might cause a perforation or rent in the mesentery. Operations, such as resection of the bowel or the removal of mesenteric tumors, may leave thinned-out areas which later result in openings. Inflammation with necrosis of tissue and the formation of scar tissue which causes contractures and dragging may produce the same result. The above causes explain a few cases, but the majority are due to a congenital defect. The latter have been well known to anatomists. Treves[11] states: "Certain holes are sometimes found in the mesentery through which intestine has been strangulated. Some of these holes, especially those that are slit-like, are due to injury, others are due to congenital defect of the mesentery." Davis[12] also states that "Rarely openings are present in the mesentery which may allow strangulation in the coils of the intestine." Piersol[13] also mentions the defects in his textbook on anatomy.

While the openings are described as being due to a congenital defect, Judd[6] is the only writer who has offered an explanation for their occurrence. He points out that the researches of Mall show that between the seventh and tenth week of fetal life the greater portion of the intestine is forced from the abdominal cavity into the coelom of the umbilical cord by the rapidly growing liver. After the tenth week the intestine normally returns to the enlarged abdominal cavity. "Once back in the peritoneal cavity the loops which collectively lay in the sagittal plane of the cord are arranged generally at right angles to the long axis of the body, and the anteroposterior colon becomes transverse" (Mall). The portion of the colon that lay within the cord now lies obliquely across the abdomen in front of the duodenum. Judd believes that the opening in the mesentery is caused by pressure rather than an actual lack of tissue. He states: "The fact that the greater part of the gut is displaced from the abdominal cavity into the umbilical cord indicates that considerable pressure is required." If sufficient pressure were exerted against the colon its position might be influenced; it might swing to the left of the small



Fig. 2. A portion of the intestine has been removed. The loops of the intestine are seen entering the opening in the mesentery. The lower loops are distended and infiltrated with blood due to strangulation and early gangrene.

intestine instead of crossing the duodenum as it normally does. "The pressure continuing as the intestine migrates into the cord, might cause the colon to continue along the path of least resistance and gradually force its way through the delicate structure of the mesentery." The fact that nearly all the openings in the mesentery occur in the same position, i. e., close to the ileocecal junction makes Judd's explanation a likely one.

CLINICAL COURSE

The age was recorded in twenty-eight of the thirty-six patients. Seven were from one to ten years, six were from eleven to twenty, three from twenty-one to thirty and four from thirty-one to forty years of age. One patient was between forty-one and fifty years of age, two cases occurred between fifty-one and sixty and four were between seventy-one and seventy-three years of age. In the series there were seventeen males and twelve females, the sex not being mentioned in seven cases. These figures indicate that no age is exempt but that the condition is more likely to result in strangulation of the intestine before twenty than after. There is no striking preponderance in either sex.

As a rule the onset is sudden, abdominal pain and vomiting being the outstanding symptoms. There are no pathognomonic symptoms to distinguish the condition from other types of intestinal obstruction. A history of trauma or chronic

inflammatory disease preceding the onset of symptoms is rare. In a few cases there are histories of vague attacks of abdominal pain, possibly due to partial obstruction. In our case the history indicated a temporary strangulation of the intestine eighteen months before the final attack.

The end results in the series of thirty-six show that eighteen recovered, twelve died and six were not traced, giving a mortality of 40 per cent. Of the last nine cases, six recovered, one died and in two the outcome was not stated. In many of the earlier cases there was a delay, varying between three and eleven days, after the onset of symptoms before operation. This delay, as in other types of intestinal obstruction, undoubtedly to some extent accounts for the high mortality in the earlier cases. It cannot be emphasized too strongly that operation is imperative in every case of intestinal obstruction as soon as the diagnosis is made. Other measures which should be instituted are gastric lavage, the supplying of fluids, chlorides and glucose. If the patient is operated upon early the strangulated intestine may be released and the opening in the mesentery can be closed. When operation is delayed, gangrene of the strangulated loops is prone to occur and in such a case it is necessary to do a two-stage operation, i. e., resection and drainage of the bowel first and an anastomosis later.

SUMMARY

1. We have added one to the thirty-five reported cases of intestial obstruction due to strangulation of the intestine through an opening in the mesentery.

2. The cause of the mesenteric opening may be trauma or inflammation, but in the majority of cases is due to an embryologic defect.

3. The clinical signs and symptoms are similar to those of acute intestinal obstruction from other causes. A correct preoperative diagnosis of the mesenteric opening has never been made.

4. The condition can be relieved if the patient is operated upon early. Operation should not be delayed when a diagnosis of obstruction has been made.

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MILITARY SURGEONS PASS RESOLUTION

The following resolution was passed at the annual meeting of the Military Surgeons Club on May 10:

"We believe that America will never seek a war and that a war will never seek a prepared America. We believe in an America, peace loving and intent on peace, but strong enough to ensure and enforce the peace. We know that the pitiably small army in existence at the start of every war has never kept us out of war. We are opposed to the disarmament of the United States for the purpose of economy or as an acclaimed means to bring about world peace or as an example which some persons hope other nations will follow."

These thoughts were expressed by the American Legion in its National Convention at Portland in September, 1932, and by the National Convention of the Reserve Officers' Association at Pittsburgh in April, 1932. We now reaffirm them.

We have confidence in the soundness of the National Defense Act and demand appropriations calculated by the War and Navy Departments as the minima necessary for a reasonably effective application of the National Defense Act. National defense interests every citizen and should be the last element of a nation's organization to be influenced by economic conditions and must be absolutely and always divorced from politics.

We believe that the minimum peace strength of the regular army at which it can carry out the missions assigned by the National Defense Act to be 14,000 officers and 165,000 enlisted men; a National Guard of 210,000 men with proportionate officers: a Reserve Corps of 120,000 officers with a cycle of training so arranged each year as to maintain a standard of reasonable efficiency throughout the corps, and with provision for the training of at least 26,000 reserve officers during the fiscal year 1934 and 1935; Citizens Military Training Camp for not less than 50,000 youths per year; a Reserve Officers Training Corps in each qualified school and college desiring it, to the end that at least 8,000 students will be graduated to the Officers Reserve Corps with six weeks' field training for senior students annually.

We believe that the basic course should be a requirement for a degree in every college and university maintaining an R. O. T. C., adequate peace-time supplies, and planning for procurement in time of emergency, including the placing of small orders for munitions to keep private plants prepared for emergencies.

THOS. F. SUCHOMEL, M.D., Chairman.
H. A. SPILMAN, M.D., Vice Chairman.
AARON C. CONAWAY, M.D., Secretary.

State Health Commissioner's Page

Walter L. Bierring

Rocky Mountain Spotted Fever in Iowa

CARL F. JORDAN, M.D., Epidemiologist

Before directing attention to Rocky Mountain spotted fever in Iowa, the disease which has apparently established itself in this state, it is but natural to think of H. T. Ricketts and the remarkable contributions which he made to our knowledge of this subject. Dr. Ricketts arrived at Missoula in western Montana, in April, 1906. During that and the ensuing year he conducted a series of ingenious experiments. He was first to demonstrate that Rocky Mountain spotted fever results from the bite of infected ticks. He studied the life history of Dermacentor andersoni, the tick chiefly concerned in the Rocky Mountain region. He showed, in addition, that active immunity follows an attack, that both male and female ticks transmit infection, that infection in ticks is increased, not only through small rodents known to be susceptible, but hereditarily as well, through the female to eggs, and from stage-to-stage through larvae, nymphs and adult ticks. With the disease Rocky Mountain spotted fever, the name of Howard Taylor Ricketts, who in 1910 died of typhus fever in Mexico, is inseparably linked.[1]

Four cases of Rocky Mountain spotted fever have recently been reported from widely separated districts in Iowa. The first case was that of a farmer, 40 years of age, living near Waucoma in Fayette county, the onset of illness being June 5, 1933. The second patient, a girl of 17 months, whose people live on a farm in Louisa county, first noticed symptoms June 6. A six-year-old boy, the third case, developed illness July 1, while visiting on a farm near Waukon in Allamakee county. The most recent case, a six-year-old boy who stayed on a farm in Clarke county, developed symptoms July 6. Diagnosis was confirmed in each instance through the Weil-Felix reaction (an agglutination test with B. proteus X 19), carried out in the state laboratory at Iowa City and verified by the National Institute of Health in Washington, D. C. The second case terminated fatally.

The geographic distribution of Rocky Mountain spotted fever now includes an area in the western states and Canada, three times as large as that suspected twenty-five years ago. In addition, since 1931, cases of the Rocky Mountain spotted fever type have been reported from states as far east as Maryland and to the south in Louisiana and Texas, as well as in some of the midwestern states.[3] During April and May of this year, Wyoming reported 44 cases of this disease, Montana 37, Idaho 28, Oregon 22, Colorado 7, Nevada 3, Washington 2, with one case each in California, Minnesota, Pennsylvania and Maryland.[3]

Symptoms and signs of this disease are described by Dyer, Rumreich and Badger[4], and in a more recent article by Rumreich.[5] Malaise and anorexia, in several of the Iowa cases preceded the acute onset with fever, severe headache, vomiting and aching pains. Restlessness and irritability are pronounced in children, followed by drowsiness, which in severe cases passes into a state of coma. A maculopapular rash appears within a few days after onset. The eruption is usually most profuse in its appearance over wrists, ankles and forehead, later becoming generalized and covering the entire body. The rash persists for a week or more, beginning with reddish petechiae which later become purplish and then brownish before gradually fading. Neck stiffness, Kernig's sign and ankle clonus are usually present. The spleen may be palpable.

Epidemiologic study through the United States Public Health Service, of cases of Rocky Mountain spotted fever, and animal experimentation in connection with these cases, have shown that the disease is transmitted either through the bite of infected ticks or through direct contact with infected tick tissues. The dog tick, Dermacentor variabilis, is most often mentioned as the vector of the spotted fever virus in the eastern, southern and midwestern states.

Has this disease but recently become endemic in Iowa? Are the human cases due to a gradual increase in the incidence of infection in the tick population? Have infected ticks been introduced through cattle imported from western states? Has the virus in ticks become more virulent and are there cycles of greater annual prevalence as suggested by Parker?[2]

The answer to these and similar questions is de-

(Continued on page 491)

The JOURNAL of the Iowa State Medical Society
ISSUED MONTHLY

RALPH R. SIMMONS, Editor.....Des Moines

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THE HORMONE TEST FOR PREGNANCY

No physician engaged in a general practice has failed at one time or another to feel the need of an accurate test for early pregnancy. Physical signs and even the history may be highly misinforming and unreliable. Every operating gynecologist has found to his chagrin that pregnancy or lack of pregnancy cannot be predetermined by usual methods, in fact, even with the abdomen open the diagnosis may still be confusing. A reliable test of pregnancy would, in many instances, prevent the fatality of an ectopic pregnancy. Temporary cessation of menstruation due to endocrine unbalanced or depressive states such as pulmonary tuberculosis, primary and severe secondary anemia, the psychoses, and hyperthyroidism, is frequently incorrectly diagnosed as being due to pregnancy. A reliable means, then, for establishing the diagnosis of early pregnancy becomes invaluable under many of these circumstances.

The early reports of Aschheim and Zondek, which some five years ago directed attention to a laboratory method of testing for pregnancy, were welcomed with wide acclaim. These observers first discovered that the urine of the pregnant woman contained considerable quantities of the anterior pituitary sex hormone. Employing this observation, they devised a test for pregnancy depending upon the action of this sex hormone on the gonads of immature rodents or isolated female rabbits. The most disturbing element in the original Aschheim-Zondek test is the rather large percentage of false positives obtained by the test. Even in the hands of skilled observers, the test was not accurate in more than 95 per cent of the cases. While false positives may invalidate the test in specific cases, the chief disadvantages of the test lie, first, in the difficulty of securing and maintaining a constant supply of immature animals of correct age and, second, in the high death rate (10 to 20 per cent) of the animals subjected to the injections of urine. Later observers have attempted to correct these difficulties by modifying the original Aschheim-Zondek method. The most successful of these modified methods is that first described by Friedman in 1929. He was able to induce ovulation in the isolated unmated rabbit by intravenous injections of urine from a pregnant woman sometimes within as short a period as twenty-four hours by using no more than 5 cc. of urine. He obviated the need of immature animals and lowered materially the death rate among his experimental animals. It appears to be a proved fact that in the hands of competent observers the Friedman test reduces to a considerable extent the incidence of false positive reactions.

A second group of pregnancy tests depends upon the presence of increasing quantities of estrin in the urine of pregnant women. Zondek in 1928 demonstrated that there exist from three hundred to six hundred mouse units of hormone present in a liter of urine from the first to the eighth week of pregnancy. His test based upon this observation requires the employment of infantile mice or animals subjected to castration. The latter group of animals are on the whole most satisfactory for the test. Urine from the pregnant woman produced changes in the vaginal secretion typical of estrus. Much depends upon the correct interpretation of the vaginal fluid, and some competent observers report a large percentage of false reactions. Even in the hands of expert observers, the estrin test is not as sensitive in early pregnancy as is the original Aschheim-Zondek test or its modification by Friedman.

A third group of observers has employed a test which depends on the effect of the hormone of the anterior pituitary and estrin contained in the blood serum of pregnant women, upon the uterus and ovaries of immature white mice. The best known of these tests is that devised by Siddall in 1928. The test, however, has not become popular because of the low degree of accuracy, this type of test being less accurate than any of the hormone tests previously devised.

Of the very recent work done in the perfection of these hormone tests of pregnancy the one reported by Hoffman is particularly noteworthy. Appreciating the value of methods permitting prompt interpretation, he has directed particular attention to methods of concentrating the hormone elements of the urine. Early this year, he reported a rabbit serum pregnancy test in which the time required for the reaction was reduced to only twenty-four hours, the shortest so far required in any pregnancy test. In the hands of the author, his methods were as accurate as those obtained by the Aschheim-Zondek test. Macroscopic inspec-

tion of the rabbit's ovaries is sufficient in all cases. The Hoffman technic will be of particular value in cases of ectopic pregnancy and those demanding emergency surgery.

Particularly promising is a modification of the pregnancy test reported by Kelly in April of this year which simplifies the technic to a minimum and employs a simpler method of interpreting results than any previously described. The test depends upon the premature establishment of the vaginal orifice in white rats by the intraperitoneal injection of urine from pregnant women.

FUNDS FOR RESEARCH REDUCED

At the recent meeting of the National Academy of Sciences, anxiety was expressed concerning funds for continued research, particularly in schools supported by popular taxation and in the laboratories supported by American industries. Investigation indicated that "the deep depression in the curve representing the recent course of science and economic events in our country is apparently not matched by a similar depression in the curve depicting the outline of new knowledge achieved through research in the domain of the physical and biological sciences."

This observation referred essentially to research as conducted outside industrial laboratories, since a recent survey conducted by the National Research Council's Research Information Service indicates that since 1930 over 12,000 scientists have been released from industrial laboratories. This year, 1,467 laboratories reported 21,464 scientists on their staffs, while in 1930 1,420 laboratories reported 33,596 research scientists.

In view of recent legislation, one would suspect that the figures recorded in this industrial survey may reflect conditions which may prevail in teaching institutions and privately conducted foundations during the next year or two. Legislators in recent sessions of their respective legislatures have refused to appropriate sufficient funds for the continuation of scientific research. This means that research will be curtailed or stopped altogether in many state institutions. Sciences in general will be severely handicapped and, in many instances, researches of a most valuable nature, now approaching completion, will be entirely lost, because of the lack of funds to bring them to a conclusion. Medical science has fared no better than science in general, and medical progress during the next few years may suffer from this curtailment of research. It is especially regrettable that universities in particular should be required to forego research, since it is this investigative spirit which creates and maintains, in its true sense, a university as an institute of learning.

ENZYME OR VIRUS

Since the recognition of certain diseases in animal and plant life due to agents which resemble in their manifestations the activity of bacterial disease, but for which a causative bacterium has not been demonstrated, science has been puzzled to determine whether the disease is one caused by a living organism of ultra-microscopic proportions, or whether the disease is one caused by a virus. Much evidence has been produced supporting each of these conceptions, but up to this time, the evidence has not been conclusive, and has not stood the test of rigorous investigation.

Among the newer contributions to this study is that made by Dr. Carl G. Vinson of the University of Missouri. Working with the mosiac disease of tobacco plants he alleges that he has been able to prove by a series of concentrations that the agent causing this disturbance is of a chemical character, and one which is held within a very simple protein molecule. He feels that the agent is not a living one since various methods are employed in the preparation of his concentrates, which according to our present standards, would be entirely destructive to any form of living material. He believes that it is probable that not the whole protein molecule which he has isolated is the real mischief maker, but that some relatively simple group of atoms, which are attached to it or a part of it, are the destructive agents. Such an atom group could conceivably attach itself to other protein molecules in healthy protoplasm, thus explaining the mechanism of infection and propagation.

Whether his experiments will stand the test of time may be questioned, but at least Dr. Vinson is to be commended for his painstaking research, and for opening to us avenues for further investigation.

ARE YOU DELINQUENT IN YOUR STATE SOCIETY DUES?

"I hear some members of business bodies talking these days about the possibility of resigning from their organizations with the object mainly of supposedly saving money. I can think of nothing more dangerously extravagant than that, a wasteful squandering of that invaluable asset of good team work at the very time when collaboration is absolutely vital. When you are out in mid-Atlantic in a storm, do you see anybody shoving off from the big liner in a rowboat by himself to save passage money? Well, hardly! Mass action is imperative and mass assaults can move mountains."—*Julius Klein, Former Assistant Secretary of Commerce of the United States.*

CANCER CURES AND TREATMENT

Since the recognition of cancer as a frequent and horrible form of death, therapy for this condition has been the goal for thousands of industrious research workers. Up to the present time, the cause or causes of the disease are not definitely known, and for this reason the treatment is largely empirical. It can be stated, however, that the promise of cure by surgery, x-ray or radium rests largely upon the early recognition of the condition and the thorough and intelligent application of these measures.

Because of the chronicity of the disease and the fact that there has been no known medical specific, the treatment of cancer has been a very attractive field for quackery. Scarcely a week passes that attention is not directed to one or more of these alleged cures, usually of secret composition, which are made and sold for the profit of the manufacturer, and not that of the patient. Realizing the need for information regarding these matters, the American Medical Association, through its Bureau of Investigation, has edited a pamphlet entitled, "Cancer Cures and Treatments" which is sold at the very nominal price of fifteen cents a copy.

The pamphlet deals with thirty-nine "cures" or "treatments" exploited in fifteen different states. Some of these, while widely advertised in their time, are now out of existence; others are still being exploited. The "treatments" themselves, as is brought out in the foreword to the pamphlet, range all the way from palpable frauds, through those whose methods seem to smack more of commercialism than of science, to others that may be said to represent the optimistic claims of misguided enthusiasts. As the foreward also emphasizes, it is to be borne in mind that a person with cancer will die just as surely by relying on an honest but misguided enthusiast as by submitting to the malpractice of the most blatant of cancer-cure swindlers.

Iowa physicians who have not familiarized themselves with this pamphlet should secure a copy from the American Medical Association and should recommend its use by patients contemplating treatment from practitioners not employing well recognized methods of treatment or by members of the laity who wish authentic information on this subject.

RESOLUTIONS ON PLASTIC SURGERY

The following resolution condemning sensational presentations of plastic surgery by irresponsible and non-representative individuals and groups was adopted by the Society of Plastic and Reconstructive Surgery at its stated meeting at the N. Y. Academy of Medicine on May 26th.

Whereas, sensational stories frequently appear in lay publications concerning the cosmetic repair of the face and body with special reference to the correction of nasal malformations and the eradication of the stigma of age; and

Whereas, these stories convey the erroneous impression that plastic surgery is purely for cosmetic purposes and involves procedures that may safely be performed by lay cosmeticians in an environment that does not provide the strict asepsis and other safeguards of a hospital operating room; and

Whereas, these stories are designed to appeal to, and promote the exploitation of, unstable and often psychopathic individuals who have no genuine deformity but are overly sensitive to negligible imperfections and the changes wrought by age,

Therefore Be It Resolved, That the Society of Plastic and Reconstructive Surgery take steps to inform the public

(1) that plastic surgery is a regular surgical specialty, embracing the reconstruction of defects and malformations that interfere with normal function as well as the repair of gross cosmetic deformities;

(2) that those engaged in the practice of plastic and reconstructive surgery require the same scientific and technical training as the practitioners of any other surgical specialty and are bound by the same ethics, adopted in the interests of the public, that govern all reputable physicians, and

(3) that the safe performance of even minor plastic and reconstructive procedures demands the precautions and safeguards of a first grade operating room;

And Be It Further Resolved, That this Society condemn the performance of any plastic operations whatsoever by lay cosmeticians and the use of beauty shops, hotel suites and convention halls for this purpose;

And Be It Further Resolved, That this Society warn the public of the dangers of any surgery at unqualified hands and the unreliability of sensational, self-aggrandizing publicity;

And Be It Further Resolved, That this Society urge the community to recognize the social aspects of plastic and reconstructive surgery and make it available, at competent hands, to the poor as well as the rich in cases where cosmetic or functional repair is genuinely indicated.

JEFFERSON COUNTY CONTRACT

Effective May 1, 1933, and running until May 1, 1934, the indigent sick of Jefferson County will be cared for by members of the Jefferson County Medical Society on a fee schedule providing for payment of one-half the fee bill adopted by the Iowa State Medical Society and printed in the July, 1931, JOURNAL.

Physicians are to be paid for the actual amount of work done, and to participate in the work the physician must be a member of the county medical society.

TO MEET THE CHANGING TIMES

Editor's Note: *A recent statement by the Board of Trustees of the Medical Society of the State of Pennsylvania discussed three very important and pertinent aspects of medical practice as altered by current economic conditions. Because of the aptness and terseness of these statements we are reproducing this article without alteration or comment:*

The county medical society may speak publicly in ways and by means that may not be adopted by the individual physician. It should voice, however, only the opinion of at least the majority of its members.

The county society should:

1. Bend every energy at this time to enroll as members every nonmember physician in the county deemed worthy of membership.

2. It should arrange and conduct study courses and study groups in the economics of sickness service, noting especially the advice of the Minority Report of the Committee on the Costs of Medical Care.

3. It should boldly assume and maintain a definite position against forms of contract medical practice that (a) involve solicitation of patients; (b) prevent actual free choice of physician; and (c) inject a profit-seeking third person, institution or organization between physician and patient.

4. It should take a definite stand for the elimination of politics from all Public Health Administration.

5. Define its position on all unfair forms of Government competition with medical and hospital practice.

6. In all discussions with lay individuals or groups or legislators, discuss *only* the ultimate deteriorating effects on the quality of medical service that have always accompanied the socialization of medical practice.

7. Plan together with dentists and hospital associations to learn the facts about present conditions of sickness service throughout the county and plan for the *orderly* extension of same.

8. (a) Ascertain the present cost of medical care of the indigent (including drugs) to the taxpayers of the municipality or county. (b) *Strive for recognition by the public* of the public's duty to furnish complete and adequate medical care to the indigent, stressing this as a *community* duty, not of the medical profession alone. (c) *Request* public authorities to cooperate with physicians and dentists for *equitable* improvements in sickness service to the indigent *before* discussing any further extension of government controlled sickness service *to others*.

The practicing physician in the present economic situation should be guided by a philosophy that causes him to be grateful, first, because his time and talents may be at least partially helpfully employed, while other professional men, such as architects, engineers, and attorneys find little if any employment.

Q. How may the practicing physician best educate the public regarding the destruction of social values involved in the socialization of medical practice?

A. Remembering at all times that people who are out of work or living on greatly reduced incomes may not be reasonably expected to have a great interest in the fact that physicians may find themselves in the same economic condition, we should, as we come into contact with our clientele, ask them if they understand:

1. That the changes recommended by the Majority Report of the Costs Committee would likely mean a loss of personal relationship between them and their personal or family doctor.

2. That it would almost surely mean a deterioration of the quality of the practice of medicine, such as formerly obtained under what was commonly known as "List," or "Lodge," practice.

3. That within ten years' time, it is believed the proper class of young men and women would no longer be attracted to a medical education and the practice of medicine.

Q. How may the individual physician contribute to the reduction of the costs of illness?

1. By encouraging patients or their friends to discuss incomes in relation to expenses of medical care.

2. By offering a plan of inclusive fees to patients with limited incomes, especially in chronic cases.

3. By hospitalizing patients only when demanded by the patient's best interests.

4. By advising patients as to the proper choice of hospital accommodations and nursing care.

5. By becoming acquainted with and fully utilizing the standard lists of drugs and supplies.

6. By refraining from indulging in unapproved forms of contract medical practice.

7. By teaching and practicing preventive medicine.

SPEAKERS BUREAU ACTIVITIES

POSTGRADUATE WORK
Fall, 1933

Below is given a tentative outline of the postgraduate courses to be given this fall by members of the faculty of the College of Medicine of our State University and sponsored by the Speakers Bureau of the Iowa State Medical Society.

COURSE I. A COURSE IN INTERNAL MEDICINE PERTAINING PARTICULARLY TO DIAGNOSIS AND TREATMENT

By Department of Internal Medicine, College of Medicine, State University of Iowa.

(20 hours—2 hours each week for 10 weeks.)

1. Gastro-intestinal disorders: The discussion of the clinical significance of the so-called digestive form of distress. The diagnosis of peptic ulcer, gastric malignancy, gallbladder disease and gastro-intestinal neuroses (irritable colon, spastic constipation, etc.) and treatment of each. 4 hrs. Fred M. Smith, M.D.

2. Diabetes: Diagnosis and treatment. 2 hrs. W. D. Paul, M.D.

3. The differential diagnosis and treatment of diseases of the lungs causing chronic cough and dyspnea with particular emphasis on bronchial asthma. 2 hrs. E. L. DeGowin, M.D.

4. Heart Disease: Classification, the diagnosis of organic heart disease and the treatment of congestive failure. 4 hrs. H. M. Korns, M.D.

5. Diseases of the kidneys: Classification of nephritis, the distinguishing features of each type and treatment. 2 hrs. W. M. Fowler, M.D.

6. Diseases of the blood forming organs: Classification, diagnosis of each form, and treatment. 4 hrs. C. W. Baldridge, M.D.

7. Diseases of the thyroid gland: The diagnosis of hyperthyroidism (toxic adenoma and Graves' Disease) and hypothyroidism—treatment. 2 hrs. James A. Greene, M.D.

COURSE II. COMBINED COURSE ON PEDIATRICS AND OBSTETRICS

(20 hours: 2 hours a week for 10 weeks.)

Pediatrics

P. C. Jeans, M.D., Head of the Department of Pediatrics, State University of Iowa

Nutrition of the infant and child. 4 hrs.
- General principles of nutrition and their practical application.
- Nutritional diseases of the infant.
- Nutritional diseases of the child.

Infectious diseases. 4 hrs.
- Diphtheria.
- Scarlet Fever.
- Pertussis.
- Poliomyelitis.
- Tuberculosis.
- Syphilis.
- Rheumatic Fever.

Miscellaneous. 2 hrs.
- Mental deficiency.
- Nephritis.
- Enuresis.

Obstetrics

E. D. Plass, M.D., Head of the Department of Obstetrics, State University of Iowa.

The Management of Normal Pregnancy with Certain of Its Complications. 2 hrs.

The Management of Normal Labor. 2 hrs.

The Management of the Normal Puerperium. Abortion and Miscarriage. 2 hrs.

Puerperal Infection. 2 hrs.

The Toxemias of Pregnancy. 2 hrs.

The courses this fall give every indication of being among the most successful, practical and interesting of any given in Iowa. They are to begin the latter part of September and will last for a period of ten weeks, one day a week in each of three centers. Not all of the three centers have been definitely decided upon yet and any county society interested in making this opportunity available to its members is urged to communicate with the Speakers Bureau immediately.

RADIO TALKS

WSUI—Thursdays, 8:00 p.m.

WOI—Fridays, 4:00 p.m.

August 3-4—A Century of Progress in Internal Medicine—H. W. Rathe, M.D.

August 10-11—Summer Skin Eruptions—H. C. Willett, M.D.

August 17-18—Fall Hay Fever—D. J. Glomset, M.D.

August 24-25—School Days Should be Health Days—J. E. Dyson, M.D.

THE OPEN FORUM

Iowa State Medical Society,
1122 Bankers Trust Bldg.,
Des Moines, Iowa.
Dear Sirs:

Enclosed is a clipping from the Wayne County *Medical Bulletin*. It could well be copied in our Journal. Sincerely,

John I. Marker, M.D.

"THEY CAN'T TOUCH ME"

All members of the medical profession should realize that it is highly essential, now, more than ever before, that they maintain their activity and standing with the county society. For the medico-legal protection alone which membership offers, this advice should at least be rigidly followed by the many who have assumed a "they can't touch me" attitude with regard to probable suits for malpractice.

The marked increase in malpractice suits emphasizes the tremendous risk involved in giving up membership which has as one of its most valuable benefits —medico-legal defense. The increase in effort to mulct the doctor is the direct result of economic stress. It should serve as a warning to physicians not only to have their wits about them in their dealings with patients but to see to it that they are adequately protected. In this latter respect physicians can do no better, particularly during these parlous times, than to retain their membership in the county medical society thereby assuring themselves of legal defense when the need arises.

The Dental Educational Council of America has adopted the following resolution relative to the final report of the Commission on Medical Education:

"The Dental Educational Council of America has given special attention to the comment on dentistry on pages 216-217 of the *Final Report of the Commission on Medical Education* (December 1932). Included in the Commission's comment is the expressed opinion that "dentistry should be developed *under* medical education." No reasons for this intended subordination of dentistry are given excepting the general opinions that (a) "It would seem logical"; (b) "would be consistent with university principles which no longer recognize the artificial separation of fields of knowledge"; and (c) "would go far toward establishing a highly desirable and valuable correlation of the professional training of these two closely related fields of practice" (medicine and dentistry).

"These suggestions for the subjugation of the dental profession are neither impressive nor persuasive. To the Dental Educational Council, cognizant of the related facts in the history of both medicine and dentistry, the proposed development of dentistry *'under'* medical education, in the United States, would (a) seem to be illogical; (b) be inconsistent with university principles which clearly recognize the public necessity for the self determination of, and for appropriate differences in education for, the various professions; and, (c) instead of correlating the professional training in medicine and dentistry, would degrade one profession for the exaltation of the other, and also demoralize the service of the practitioners thus dishonored.

"There should be intimate coordination between the principles and procedures of education for medical practice and for dental practice. Although remaining independent, these two forms of health-service education should be made more closely interdependent for the betterment of each. The Council and the dental schools have long promoted this mutual helpfulness. The strengthening of this constructive educational development, in the public interest, appeals to us as a far more important interprofessional objective than the relegation of one profession to a position of enforced inferiority. For the attainment of this worthier purpose, we pledge the cordial interest and effective cooperation of the faculties of the dental schools in the United States."

Sincerely yours,
Albert L. Midgley, Secretary.

THE HEBREW PHYSICIAN

An issue of "*The Hebrew Physician*" (Harofeh Hoibri), the only Hebrew Medical Journal published outside of Palestine, edited by Dr. Moses Einhorn, has just come to our attention.

This issue consists of 168 pages, and is larger and more elaborate than the previous editions. Besides numerous articles on general medical subjects, there are three additional divisions: a special section on Health in Palestine by Dr. H. Yassky, medical director of the Hadassah hospitals; a section on Talmud and Medicine, and an interesting section devoted to Hebrew Medical Terminology, which will be of great service to the future medical department of the Hebrew University.

All physicians who are interested in this journal, are requested to communicate with *The Hebrew Physician*, 983 Park Avenue, New York City.

WOMAN'S AUXILIARY NEWS

Edited by the Press and Publicity Committee
MRS. OLIVER J. FAY, *Chairman*
10 Thirty-fifth Street, Des Moines

ANNUAL REPORT OF THE WOMAN'S AUXILIARY TO THE MUSCATINE COUNTY MEDICAL SOCIETY

There are twenty-four doctors' wives in the county who are eligible for membership. Of this number, eighteen were members last year and eighteen this year.

Auxiliary meetings:

We have held meetings once each month with the exception of June, July and August, with an average attendance of twelve members.

General character of meetings:

Since we organized only a year ago, our first meetings were taken up with the duties of organization. Since last fall our meetings have been a combination of social and educational programs.

Health education work:

We have had two educational programs, for one of which we depended upon an outside speaker. The second educational meeting was a study of some of the material sent with the national study envelopes. One of our members is an active worker in the Public Health Bureau of the city of Muscatine.

Cooperation:

The health administration of both the county and city of Muscatine is so well organized that we have not done anything, as an auxiliary unit, along that line. However, we are willing to cooperate in whatever way we can.

Hygeia:

We have done nothing this year to promote *Hygeia*. We have no subscriptions excepting as our husbands subscribe for it to use on the reading tables of their offices.

Social:

In September we had a picnic for the doctors of the county and their families, regardless of the membership of the wife in the auxiliary.

In October we had a tea for the nurses and public health workers of the county, at which Miss Hartz of the State Public Health Bureau was the speaker.

In March we had a dinner meeting with the county medical society, having a joint program after the dinner and then separating for our business meetings.

Press and publicity:

All of our meetings have been reported to the local press and two of them have been reported to the state chairman of Press and Publicity.

Relationship to medical profession:

The county medical society has cooperated with us in every way, it being at their suggestion that we organized. They seem to be desirous that we spend some time in study and self education of things pertaining to the medical profession so that we, as individuals, will be prepared to assist indirectly in the public education.

Mrs. T. I. Wigim, President.

Dallas-Guthrie Society

The Woman's Auxiliary to the Dallas-Guthrie Medical Society met Thursday, July 20, with Dr. and Mrs. M. N. Voldeng in the Art Rooms of the State Hospital at Woodward. After a delicious buffet luncheon the medical society and the Woman's Auxiliary adjourned to separate meeting places.

The Woman's Auxiliary was called to order by the President, Mrs. E. L. Bower, and new officers were elected as follows: Mrs. P. B. Glew, Dallas Center, president; Mrs. I. C. Pond, Perry, president elect; Mrs. C. M. Porter, Woodward, vice president; Mrs. E. T. Warren, Stuart, secretary, and Mrs. M. H. Brinker, Yale, treasurer.

The president appointed Mrs. E. L. Bower, Guthrie Center, chairman of press and publicity.

Dr. C. B. Taylor of Ottumwa, president of the State Medical Society, and Mrs. W. A. Seidler of Jamaica, president of the State Auxiliary, were the two speakers at the meeting. Among the guests were Mrs. B. H. Sherman of Hollywood, California, Mrs. C. B. Taylor of Ottumwa, and Mrs. Channing G. Smith of Granger, Iowa.

The remainder of the afternoon was spent in visiting the institution and learning of its work and the efficient manner in which it is being conducted.

Upper Des Moines Auxiliary

A business meeting of the Woman's Auxiliary to the Upper Des Moines District Medical Society was held Thursday, June 29, at Lake Okoboji. The following officers were elected: Mrs. Donald M. Rodewig of Spirit Lake, president; Mrs. Smith C. Kirkegaard of Ringsted, vice president; Mrs. Peter G. Grimm of Spirit Lake, secretary and treasurer.

SOCIETY PROCEEDINGS

Black Hawk County

Albert M. Snell, M.D., of the Mayo Clinic, Rochester, Minnesota, addressed members of the Black Hawk County Medical Society, Tuesday, July 18, at their regular meeting held at Wameso Lodge, Cedar Heights. His subject was Recent Observations on the Etiology and Clinical Course of Cirrhosis, and his paper was discussed by Herbert Rathe, M.D., of Waverly; Raymond S. Grossman, M.D., of Marshalltown; and J. L. Kestel, M.D., of Waterloo.

Bremer County

A chest clinic was conducted for the Bremer County Medical Society, Friday, July 7, at St. Joseph's Mercy Hospital, Waverly, by John H. Peck, M.D., and Daniel J. Glomset, M.D., both of Des Moines. Following the evening dinner, Dr. Peck spoke on The Recognition of Adult Tuberculosis, and Dr. Glomset discussed The Pathology of Rheumatic Disease.

James E. Whitmire, M.D., Secretary.

Dallas-Guthrie Society

The regular meeting of the Dallas-Guthrie Medical Society was held at "The Meadows," Woodward, Thursday, July 20, with the following program: Report of the Delegate, E. L. Bower, M.D., of Guthrie Center; Vaginal Bleeding in the New Born Infant, Henry E. Kleinberg, M.D., of Des Moines; and a Dry Clinic, presented by members of the hospital staff.

Davis County

Beginning with a twelve-thirty dinner, the annual picnic of the Davis County Medical Society, was held Thursday, July 20, at the Bloomfield Country Club. The afternoon program was as follows: Care and Feeding of the Infant and Baby Up to the Twelfth Month, J. C. Donahue, M.D., of Centerville; Influenza: Its Course, Complications, Prognosis and Treatment, C. S. Hickman, M.D., of Centerville; A Tribute to the Doctor, Mrs. T. N. Jayne, of Minneapolis, daughter of Dr. and Mrs. W. L. Downing, of Moulton; and Who Killed Cock Robin? C. A. Henry, M. D., of Farson.

Decatur County

The Decatur County Medical Society met in the new Decatur County Hospital, Friday, June 23. Con R. Harken, M.D., of Osceola, presented a paper on Fractures of the Jaw, which proved to be very interesting and instructive. Guests of the society included physicians from Wayne and Clarke counties, and almost every member of the dental profession of Decatur County. After an inspection tour of the new hospital, which will soon be open for service, the meeting adjourned.

M. W. Rogers, M.D., Secretary.

Floyd County

Tuesday, June 27, the Floyd County Medical Society met in regular session in Charles City. At five-thirty, William Gibbon, M.D., of the State University of Iowa, conducted a fluoroscopic demonstration at the Cedar Valley Hospital. Following a seven o'clock dinner at the Hotel Hildreth, Dr. Gibbon presented an interesting lecture on The General Uses of X-Ray.

James B. Miner, Jr., M.D., Secretary.

Jefferson County

Clarke W. Mangun, M.D., assistant superintendent of the Mt. Pleasant State Hospital, addressed the Jefferson County Medical Society, Friday, July 7, on Mechanisms of Mental Disorders. Dr. Boice, councilor for the eighth district, was present and spoke briefly on Activities of the State Society.

K. G. Cook, M.D., Secretary.

Johnson County

More than sixty-five members of the Johnson County Medical Society enjoyed a picnic Wednesday, July 5, on the lawn at the home of Dr. and Mrs. George C. Albright. The committee in charge consisted of Drs. J. D. Boyd, chairman, E. L. DeGowin, G. D. Jenkins, F. L. Love, W. R. Miller, Evelyn Olson, H. C. Parsons, F. J. Rohner, E. B. Woods, all of Iowa City, and Dr. R. J. Hennes, of Oxford.

Louisa County

The Louisa County Medical Society met Wednesday, July 12, at Meyerholtz Lake, near Wapello, for the annual picnic. Lunch was served at one o'clock, and the afternoon was spent in fishing and visiting. Many of the doctors brought their families and the attendance approximated sixty.

E. R. King, M.D., Secretary.

Wapello County

The Wapello County Medical Society will be host to members of the Ninth Councilor District and other invited guests, on the evening of Tuesday, September 19, at a complimentary dinner at the Wapello Club in Ottumwa, in honor of Dr. Charles B. Taylor, President of the Iowa State Medical Society. An excellent program has been arranged, with Dr. Oliver J. Fay, of Des Moines, acting as toastmaster. Others to appear on the program are: Dr. Daniel J. Glomset of Des Moines, Dr. Fred Smith of Iowa City, Dr. John H. Peck of Des Moines, Dr. Royal F. French of Marshalltown, and Dr. Murdoch Bannister of Ottumwa. Every effort has been taken to make this an exceedingly pleasant and profitable meeting. It is hoped that there will be a large attendance, and a royal welcome is assured everyone.

Evon Walker, M.D., Secretary.

Austin Flint-Cedar Valley Medical Society

The June meeting of the Austin Flint-Cedar Valley Medical Society was held in Cedar Falls, Tuesday, June 20, at the Hotel Black Hawk. The following program was presented: Infectious Mononucleosis, S. W. Barnett, M.D., Cedar Falls, discussion by H. W. Rathe, M.D., Waverly; Carcinoma of the Bladder, V. S. Counseller, M.D., Rochester, Minnesota; and Pediatric Clinic by Glen E. Harrison, M.D., of Mason City. After the noon luncheon and business meeting, the afternoon program was presented, consisting of: Treatment and Prophylaxis of Gas Bacillus Infection, T. J. Irish, M.D., Forest City; Report of a Series of Perforated Peptic Ulcers, M. J. McGrane, M.D., New Hampton; The Autopsy, J. C. Hancock, M.D., Dubuque, discussion by F. P. McNamara, M.D., Dubuque; Surgical Clinic, C. F. Dixon, M.D., Rochester, Minnesota; Eye Clinic, C. S. O'Brien, M.D., Iowa City. At the six o'clock banquet, Professor R. L. Abbott of the Iowa State Teachers College was the speaker, taking as his subject, The Doctor in 1999. During the business session, Dr. M. N. Gernsey of Waverly, was elected president for the coming year, and Dr. W. E. Long of Mason City, was re-elected secretary and treasurer.

First Councilor District Meeting

Moses Barron, M.D., Associate Professor of Medicine, University of Minnesota, was the guest of the First Councilor District, when that organization held its meeting Thursday, July 27, in Waverly. Dr. Barron spoke on The Pathology of Nephritis, at the afternoon meeting, and again in the evening, after the six o'clock cafeteria luncheon, on The Diagnosis and Management of Nephritis.

Northeastern Iowa Counties Meet

Arthur H. Sanford, M.D., of the Mayo Clinic, Rochester, Minnesota, presented a paper on Laboratory Methods and Their Significance, before members from the Allamakee, Clayton, Fayette, and Winneshiek County Medical Societies, Tuesday, July 18, at Postville. L. L. Carr, M.D., of Clermont, read a paper on Some Interesting Fractures.

Twin Lakes District Medical Society

The Eleventh Annual Assembly of the Twin Lakes District Medical Society was held Thursday, July 13, at Burns' Alhambra Pavilion, near Rockwell City. The session opened with an address by David M. Berkman, M.D., of the Mayo Clinic, Rochester, Minnesota, who spoke on Quo Vadis Medico? Howard L. Beye, M.D., of the State University at Iowa City, then conducted a diagnostic clinic in general surgery, including one case of Sub-diaphragmatic Abscess, one of Cancer of the Rectum, one of Common Duct Stone, and one of Acute Osteomyelitis. After an intermission for the picnic luncheon, the afternoon program convened at 2:00 p.m., with a diagnostic clinic in orthopedic surgery, conducted by Arthur Steindler, M.D., also of the State University at Iowa City. Fred M. Smith, M.D., another professor from the State University of Iowa, presented a diagnostic clinic in medicine, and the session closed with an address by Milford E. Barnes, M.D., of the State University of Iowa College of Medicine, on The Public Milk Supply and the Public Health.

Dr. James McAllister of Odebolt, was honored with the presidency of the society, and Dr. Paul W. Van Metre of Rockwell City was again named secretary and treasurer.

Waterloo Medical Society

Newly elected officers of the Waterloo Medical Society are: Dr. J. E. Ridenour, president; Dr. H. A. Bender, vice president; Dr. F. H. Entz, secretary; and Dr. Howard Hartman, treasurer.

INTERESTING NEWS

In Brief

August 15 has been announced as the opening date for the new Decatur county hospital located north of Leon.

National and state legislation would cut the red tape on the medical use of liquor by physicians when written for by prescription.

By an apparatus devised in a Belgian laboratory, it is now possible to photograph directly the lining mucosa of the stomach.

The latest theory regarding the cause of gastric ulcers is that this condition develops from a lack of Vitamin A in the diet.

Poor relief for the first six months of 1933 has cost Linn county $200,585.29, of which professional medical services, nurses, and hospital fees, accounted for only $27,663.22.

The Health Department of the State University of Iowa rendered service in 22,000 distinct cases, during the academic year just ended, according to figures released by Dr. Milford E. Barnes, director of the department.

Theelin injected into young girls suffering gonococcal vaginitis is reported to effect the prompt cure of this distressing condition. The hormone acts favorably in these cases by thickening the epithelium of the vaginal canal.

Banner Howard lost his last appeal for state permission to practice naprapathy when the Supreme Court recently denied him a rehearing. It will be remembered that in 1930 he was enjoined from practicing medicine without a license.

Repudiating the established view that degeneration begins at the peripheral point in an injured nerve and proceeds towards the central nervous system, observa-

tions made upon the catfish indicate that the reverse of this process uniformly follows serious injury to nerves.

Not one Iowa criminal has been sterilized since the statute permitting compulsory sterilization of persons deemed unfit to have children went into effect four years ago. Obviously there is some weakness in the law which is defeating the purpose of this legislation.

Syntathin, one of the newest hormones to be studied, has been split by Professor Cannon of Harvard into two fractions designated as I and E. Syntathin E is produced when smooth muscle is made to contract, and Syntathin I is produced when smooth muscle is made to relax.

Although data for 1932 are not available, the following figures indicate that the death rate in the United States is undoubtedly on the decline, in spite of the depression: 1880, 19.9 per 1,000; 1900, 17.5 per 1,000; 1910, 14.9 per 1,000; 1920, 13 per 1,000, and 1930, 11 per 1,000.

Vesting executive power in a special hereditary board of health, the Nazi government, under the leadership of Adolph Hitler, has enacted a new law authorizing sterilization at the individual's own request, or in extreme cases, even without the consent of the individual.

Dr. G. Philip Grabfield of Boston concludes from observations made upon nephritis by employing a gelatin diet, that nephritic patients with edema fail to excrete sulphur as well as nitrogen, while patients suffering from the same disease but exhibiting no edema fail to excrete nitrogen alone.

Statistics supplied by the Prudential Insurance Company refutes the commonly accepted idea that cancer of the esophagus is common among the Chinese. These data indicate that cancer is only about one-half as prevalent in the far east as in the larger cities of Europe and America.

Investigations at the University of Southern California would indicate that fasting adult male rats had more sugar stored in their livers than did the females, while the females had more fat stored in their livers than the males. This observation may be of importance in the management of diabetes and in the regulation of diets in the different groups.

PERSONAL MENTION

Dr. Glenn C. Blome, formerly of Iowa City, has located in Ottumwa, to engage in the practice of surgery.

Dr. Clyde A. Boice, of Washington, has been chosen president of the State Board of Health.

Dr. G. Baldwin Palmer, after twenty-three years of practice in Fort Dodge, has left that city to locate in Rolfe.

Dr. Charles Oberman, formerly an assistant in the department of neurology, State University of Iowa College of Medicine, has been added to the staff of physicians at the Clarinda State Hospital.

Dr. Floyd G. Sarff, a recent graduate of the State University of Iowa College of Medicine, plans to locate in Logan, about the first of August.

Dr. W. E. Anthony, of Ottumwa, delivered the commencement address for the twelve graduating members of the Ottumwa Hospital Training School, Friday, June 23.

Dr. John B. Stoll, who for the past two years has conducted a general practice in Fontanelle, has recently moved to Creston.

Dr. J. M. Jackson, of Jefferson, has announced the association of Dr. C. L. Hansen with him in the practice of medicine and surgery. Dr. Hansen comes to Jefferson directly from Milwaukee, where he has just completed his interneship at the Milwaukee County General Hospital.

Dr. Paul J. Leehey, who has been connected with the United States Public Health Service at the federal prison in Leavenworth, Kansas, has located in Independence, where he will enter private practice.

Dr. G. D. Jenkins has arrived in Burlington, where he will be engaged in the practice of medicine. Dr. Jenkins for the past five years has been a member of the staff of the State University of Iowa College of Medicine.

Dr. J. N. Lande, of Sioux City, sailed from New York about the middle of July, for an extended trip through the European countries, planning to return the first of October. While in Vienna, Dr. Lande will take a postgraduate course in diseases of children.

Dr. Donald G. Mackie, a graduate of the State University of Iowa College of Medicine, who just finished his interneship at the Methodist Hospital in Des Moines, has located in Vinton.

Dr. O. R. Hyndman, who has been an associate professor in neurosurgery at the State University of Iowa College of Medicine for the past three years, was recently granted a year's leave of absence from the University. During this year Dr. Hyndman will spend his time studying under W. G. Penfield, M.D., Clinical Professor of Neurosurgery, McGill University Faculty of Medicine, Montreal, Canada.

Dr. John H. Peck, of Des Moines, delivered his president's address before the National Tuberculosis Association, at Toronto, Canada, Tuesday, June 27. The title of the address was The Unfinished Task in Tuberculosis.

Dr. A. E. Crew, of Marion, has announced the association of his son, Dr. Phil Crew, with him in the practice of medicine and surgery. Dr. Phil Crew, for the past year has been interning at the Swedish General Hospital in Seattle, Washington.

Dr. J. W. Webb, who has practiced at Bonaparte for a number of years, has moved to Bloomville, Ohio, where he expects to locate permanently for the continuance of his practice.

Dr. Lewis J. Dimsdale has opened offices in Sioux City at 432 Frances Building. Dr. Dimsdale, after his graduation from the State University of Iowa College of Medicine in 1930, completed a year's interneship at the Sioux City Lutheran Hospital, at the end of which time he became health physician and surgeon at the Creighton Memorial Hospital in Omaha.

MARRIAGES

The wedding of Miss Louise Radschlag and Dr. Joseph E. Dvorak, both of Sioux City, took place July 1, in the First Presbyterian Church of Sioux City. After the ceremony, Dr. and Mrs. Dvorak motored to Lake Okoboji where they spent a few days, returning to live at the Warrior Hotel in Sioux City, where Dr. Dvorak is engaged in the practice of medicine.

Miss Paulyne M. Breen of Boone, and Dr. Emerson B. Dawson of Fort Dodge, were married at the home of the bride in Boone, July 23. The young couple left immediately on a two weeks' motor trip, which included visits in Kansas City, St. Louis, Chicago, and Minneapolis, after which they returned to Fort Dodge, where Dr. Dawson has been practicing medicine for the past three years.

Dr. Evelyn Olson, of Iowa City, was married to Dr. Glenn J. Anderson, of Winterset, July 12, at the home of the bride's parents in Sac City. The bride has been connected with the pediatrics department of the University Hospitals in Iowa City for the past year, and Dr. Anderson has been practicing medicine in Winterset for two years. After a short trip to Minnesota, they returned to Winterset where they will make their home.

The wedding of Miss Lillian Peterson, of Cedar Falls, and Dr. R. F. Nielsen, also of Cedar Falls, took place June 21, at the Nazareth Lutheran Church. No wedding trip was planned for the immediate future, and Dr. and Mrs. Nielsen are at home in Cedar Falls, where Dr. Nielsen has been practicing for the last three years.

DEATH NOTICES

Luckey, John Eddy, of Vinton, aged sixty-six, died June 29, after a long illness. He was graduated in 1897 from Rush Medical College, and at the time of his death was a life member of the Benton County and Iowa State Medical Societies.

Pascoe, Henry R., of Carroll, aged fifty-six, died July 7, after suffering a slight stroke a week ago. He was graduated in 1906 from the Northwestern University Medical School and at the time of his death was a member in good standing of the Carroll County Medical Society.

RESERVE OFFICERS COURSE AT MAYO CLINIC

The medico-military course of inactive duty training for medical department reserve officers, which has been held at the Mayo Clinic during the past four years, will again be held this year from October 1 to 14, both dates inclusive. This inactive duty training will follow the plan so well worked out under the auspices of Colonel George A. Skinner and the military features will be under his personal supervision.

This type of military medical training is now well established and has proved its worth during the past four years. The course offers valuable and interesting training for medical department officers of all the components of our national defense. The staff and faculty of the Mayo Clinic have again placed their unexcelled facilities at the service of their government in the interest of preparedness, and have extended an invitation to all the services to participate.

This short course is applicable to general practitioners and specialists alike.

Application for this course of inactive duty training should be made to the Corps Area Surgeon, Seventh Corps Area, Omaha, Nebraska. Applications should state the character of the work the candidate desires to follow. Each applicant should fully understand that the invitation to accept this course of study without charge is extended by the Mayo Clinic; that the project is without expense to the government; and that one hundred hours' credit will be given those who take and complete the course. While it is desirable to attend the entire course, those whose time will not permit this may join or leave at any time and will receive credit for the hours spent in training. Uniforms are optional.

DR. HARVEY CUSHING ACCEPTS APPOINTMENT AT YALE

President James Rowland Angell of Yale University, has announced the acceptance by Dr. Harvey Cushing of the Sterling Chair of Neurology at the Yale School of Medicine. This position was created by a gift of $300,000 from the estate of John W. Sterling. It is expected, according to announcements, that Dr. Cushing will engage in research work in laboratories of the Sterling Hall of Medicine.

History of Medicine in Iowa

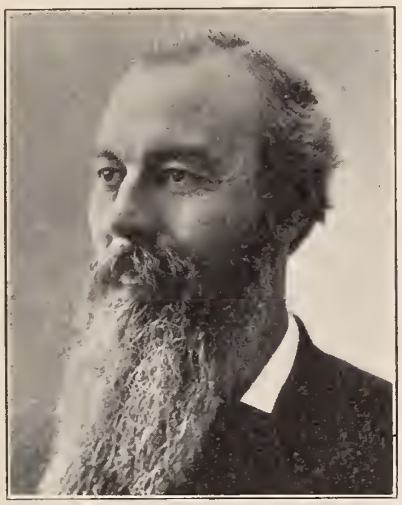
Edited by the Historical Committee

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Dr. Tom. B. Throckmorton, Des Moines
Dr. Walter L. Bierring, Des Moines
Dr. John T. McClintock, Iowa City

THE MEDICAL VON LACKUMS*

Three Generations of Practicing Iowa Physicians

To Herman and Mary von Lakum, as the name was then spelled, Peter, their first child, who was to pioneer in medicine, was born in 1842 at Duisburg am Rhein, Germany. These ancestral von Lakums, who were of German and French extraction, belonged to the original German aristocracy, as the "von" indicates. They were people of importance, had holdings and ruled similarly to the Scottish chieftains. Because of great losses in one of the German wars, Herman and Mary von Lakum were prompted to leave Germany for the United States. At this time their son, Peter, was eight years of age. Members of this generation have been told that large sums of money were offered for the transfer of the "von" when the family left Germany.



Peter von Lackum, M.D.
1842-1909

The family settled on a farm near Lomira, Dodge county, Wisconsin. Peter was active in the farm work and in his early adult life became a botanist, studying roots, herbs, bark and plant life in their natural habitat near his father's home. The father censured the boy very much for following this hobby and not applying himself to the regular farm routine.

Peter received a meager common school education, but read medicine in a doctor's office and often went about himself administering to the sick. He married Augusta Gartman and their eldest son, Herman J., was born in Dodge county, Wisconsin, September 19, 1861. When Herman was five years of age, both families moved to a farm north of St. Charles, Minnesota. Peter attended a two-year medical course at The Physiomedical Institute of Cincinnati, Ohio, and was graduated in 1869, at which time he returned to St. Charles and began the practice of his chosen profession. From there he moved to Preston, Minnesota, and then to Winona, Minnesota. Although he had established a practice in this city, he left abruptly because he was often asked to perform illegitimate practices and this he positively refused to do. From Winona this first Dr. von Lackum moved to Ackley, Iowa, where he remained for four years. Here he was appointed local surgeon for the Iowa Central Railroad. In order to improve school facilities for his family, he moved to Cedar Falls, and then to Waterloo.

While at Cedar Falls he organized the Iowa State Physiomedical Society, of which he became president. Governor Gear at this time called him to Des Moines relative to an appointment to the State Board of Health, which we know Dr. von Lackum did not accept. Later he was affiliated with the Iowa State Eclectic Medical Society and the National Eclectic Medical Association.

From the Waterloo home the three sons now took up their professional training. Herman Julius, the oldest son, was graduated with highest class honors from the King Eclectic Medical College, Des Moines, Iowa, in 1886; John Peter, the

*Biography by H. J. von Lackum, M.D., Dysart, Iowa.

second son, was graduated as president and second in his class from the Dental College of the University of Iowa in 1891; and Henry Harrison, the third son, attended the Dental College at the University of Iowa for one year and was graduated fourth in his class from the American College of Dental Surgery, Chicago, Illinois, in 1892. He later received a diploma from the College of Dentistry, Northwestern University.

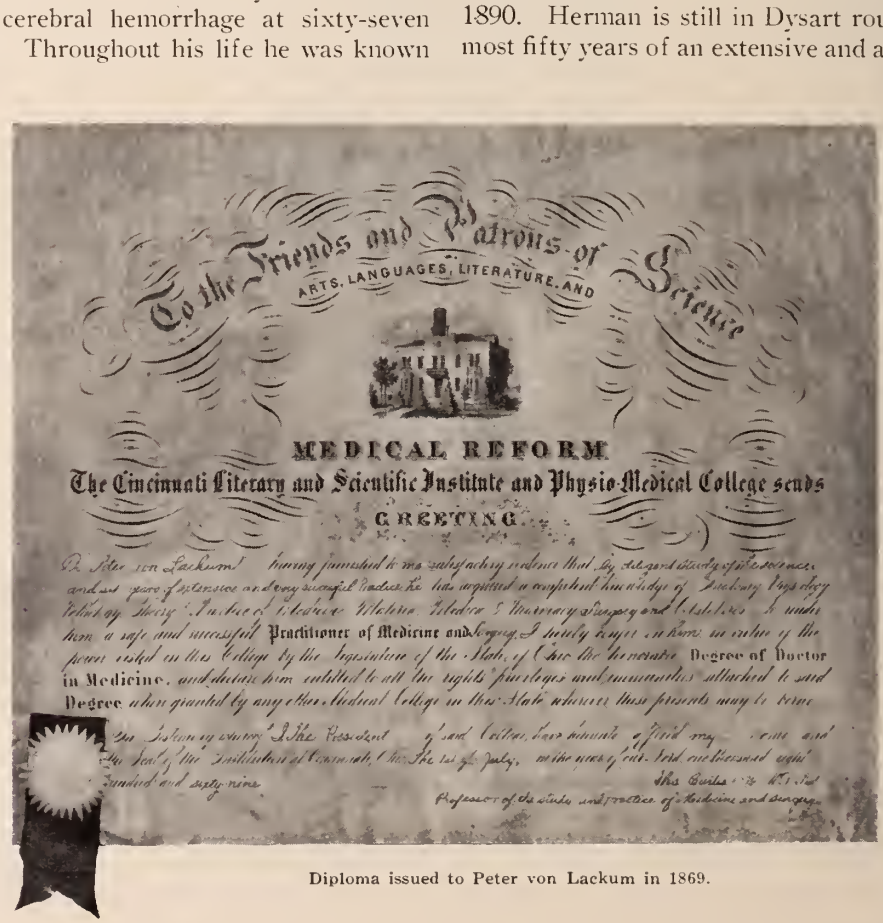


Herman Julius von Lackum, M.D.
1861—

While practicing in Waterloo, Peter von Lackum, by request, gave a few special lectures on obstetrics and gynecology at the King Eclectic Medical College of Des Moines. After this, because of the practical simplicity in his lectures, the student body petitioned the management of the school to give him the professorship of the principles and practice of medicine. He served in this capacity for three years as a non-resident professor. It was during this period that he moved to Omaha, Nebraska, where he practiced for nineteen years until his death from cerebral hemorrhage at sixty-seven years of age. Throughout his life he was known as a natural philosopher and linguist, and a very capable mechanic. He had letters of patent on a device for sacking grain from a fanning mill, a railroad self coupler, a railroad snow plow and a curtain roller.

Books from his library reveal his name as Peter von Lakum by his father's handwriting. However, on his later memberships and licenses to practice, his name is spelled Peter von Lackum, although no court record can be found which authorized the addition of the "c."

The second generation of this family was led in the medical tradition by Herman Julius, who assisted his father in his practice in Waterloo. On May 26, 1886, they performed an operation for vaginal removal of a uterine tumor at Dysart. The operation was performed in a country home and Herman was left in charge. During his stay, services were extended to others and, on query, his father advised him to remain for a while at least. He married Emma Louisa Kullmer, August 6, 1890. Herman is still in Dysart rounding out almost fifty years of an extensive and active practice.


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in Medicine,
Degree
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Diploma issued to Peter von Lackum in 1869.

He holds a state of Iowa physician's license, number 895, issued in November, 1886, by J. F. Kennedy, secretary. He has been a member of the Iowa State Eclectic Medical Society and the National Eclectic Medical Association since 1887 and of the Tama County, Iowa State and American Medical Associations since 1908. He served the Tama County Medical Society as president during the year 1930. At Gladbrook, Iowa, June 9, 1933, the Tama County Medical Society held a special meeting in honor of its two oldest members, Dr. H. J. von Lackum and Dr. A. F. Walter, celebrating "A Century of Medicine," the combined time of the former's forty-seven years and the latter's fifty-three years of active practice in their respective communities. He became local surgeon for the B. C. R. & N. Railroad and later was reappointed by the C. R. I. & P. and has been a member of this railroad's surgeon's association since 1918. He was examiner for many fraternal as well as old line insurance companies. He has served many terms as a member of the local bank boards and board of education, sponsoring the Dysart Consolidated School District, known as one of the largest in the state, comprising forty-eight sections.

John Peter, born September 21, 1865, was married to Genevieve Hartman. Their family consisted of two sons and two daughters, three of whom have made journalism their profession. The dental career of Dr. von Lackum was suddenly terminated in 1905 by a ruptured gallbladder.

Henry Harrison, born July 16, 1872, at Preston, Minnesota, the youngest of the three sons of the "medical pioneer" entered the dental practice with his brother, John Peter, at Waterloo, later opening an office of his own at La Porte City. At present he lives in Kansas City, Missouri, and is a traveling representative and associate of Reed and Carnick, pioneers of glandular therapy, Jersey City, New Jersey. His son, William John, a graduate of Wentworth Military Academy, is at present taking premedical work at the University of Missouri.

Members of the third generation of the medical profession produced in this family, licensed to practice in Iowa, are sons of Dr. Herman Julius von Lackum. They include the late Herman LeRoy, William Harrison, of New York City, and John Kenneth, of Cedar Rapids. They, with their two sisters, Helen Theresa and Mary Winona, all received degrees at the State University of Iowa.

At the university all three brothers were members of Nu Sigma Nu medical fraternity and active in the university's major athletics. Each received major letters and captaincy of one major sport. Herman LeRoy was awarded the Big Ten Conference medal for excellence in scholarship and athletics in 1915, winning his "I" in baseball; William Harrison was captain of the 1915-16 basketball team; and John Kenneth also captained a basketball team, receiving the Big Ten Conference scholarship and athletic medal in 1918.

Upon his graduation from the State University of Iowa College of Medicine, in 1915, Herman LeRoy completed his interneship at the University Hospital, serving one year with Dr. C. J. Rowan in general surgery, and one year with Dr. Arthur Steindler of the orthopedic department. From here he went to New York City for a special



Herman LeRoy von Lackum, M.D.
1892-1928

Willliam H. von Lackum, M.D.
1893—

John Kenneth von Lackum, M.D.
1895—

orthopedic course with the late Dr. Russell A. Hibbs in the New York Orthopedic Dispensary and Hospital. He was elected to membership in the Medical Society of the County of New York, March 26, 1923, and a Fellow of the New York Academy of Medicine, November 1, 1923. Soon after going to New York, he was appointed surgeon for Hope Farm, a semi-orphanage institution, and to the Anatomy Staff of Columbia University College of Physicians and Surgeons. In 1928 he was made assistant professor of orthopedic surgery at this institution.

He was a First Lieutenant in the medical corps during the World War, receiving his discharge from the service, January 10, 1919. He later resumed his army affiliations concurrently with his practice. His commissions were: Captain of Medical Corps of the New York National Guard, June 5, 1924; Second Lieutenant in the Air Corps of the New York National Guard, September 8, 1927, and Second Lieutenant in the Air Corps of the United States Army, November 11, 1927. On June 30, 1928, he was piloting a plane with a companion flyer from Staten Island to the summer encampment of the Air Corps when the plane crashed near Watertown, New York, resulting in his instant and untimely passing at thirty-six years of age.*

During his senior medical year, William Harrison interned at the University Hospital in the orthopedic service of Dr. Arthur Steindler. Immediately after his graduation from this institution in 1918, he entered the surgical department under Dr. C. J. Rowan and spent several months under Dr. N. G. Alcock. During this time he was also in the Medical Enlisted Reserve Corps, receiving his discharge on November 30, 1918. The next three years were spent doing specialized urological work under Dr. Louis A. Schmidt of Chicago until he became a member of the urological staff of the Mayo Clinic, Rochester, Minnesota, where he remained for nine years. In 1930 he accepted an appointment from the New York Orthopedic Dispensary and Hospital in the service of the late Dr. Russell A. Hibbs. He is now a member of the surgical staff of the New York Orthopedic Dispensary and Hospital and an instructor in orthopedic surgery and anatomy at the Columbia University College of Physicians and Surgeons.

Mrs. William Harrison von Lackum, formerly Lena Parsons, is the daughter of Dr. Arthur Parsons of Geneseo, Illinois, and a sister of Dr. John Parsons, of Creston, Iowa. Their three children are William Harrison, junior, eight, Martha Louise, six, and Jane Elizabeth, three.

John Kenneth was graduated from the State University of Iowa College of Medicine, in 1920. He served a rotary surgical interneship at Harper Hospital, Detroit, Michigan, for one year, returning to Iowa City in 1921, where he received an appointment in the head specialty department. University Hospital under Dr. L. W. Dean. He was appointed clinical assistant in this department for the following year. During his first year, he received a Master of Science degree from the graduate college of the university. He was a member of the Medical Enlisted Reserve Corps from which he was discharged on November 30, 1918. He has practiced his specialty in Cedar Rapids, Iowa, since 1923; is a member of the Linn County, Iowa State, and American Medical Associations, and is interested in organized medicine as a Linn County delegate to the state society for the past four years. He was married in 1924 to Addella Boies, daughter of the late Judge Herbert Barber Boies of Waterloo, Iowa. Judge Boies' grandfather, Dr. Philo J. Barber, was a pioneer physician of Waterloo. Dr. and Mrs. J. K. von Lackum are the parents of three children, Herbert Boies, six, John Kenneth, junior, four, and Marian, one.

It is to be hoped that John Peter, junior's family of two boys; William Harrison's family of one boy and two girls; and John Kenneth's family of two boys and one girl, bearing the "pioneer's" name and a double medical heritage, may establish another generation of medical history in Iowa.

* The August, 1933, issue of Surgery, Gynecology and Obstetrics contains an article "Removal of Vertebral Bodies in the Treatment of Scoliosis" by the late Herman LeRoy von Lackum, M.D.

THE AMERICAN COLLEGE OF PHYSICIANS TO MEET IN CHICAGO, 1934

The American College of Physicians will hold its Eighteenth Annual Clinical Session in Chicago, with headquarters at the Palmer House, April 16-20, 1934.

Announcement of these dates is made particularly with a view not only of apprising physicians generally of the meeting, but also to prevent conflicting dates with other societies that are now arranging their 1934 meetings.

Dr. George Morris Piersol, of Philadelphia, is President of the American College of Physicians, and will arrange the program of General Sessions. Dr. James B. Herrick, Emeritus Professor of Medicine of Rush Medical College, Chicago, has been appointed general chairman of local arrangements and will be in charge of the program of clinics. Mr. E. R. Loveland, Executive Secretary, 133-135 S. 36th Street, Philadelphia, Pa., is in charge of general and business arrangements, and may be addressed concerning any feature of the forthcoming session.

The History of Medicine in Lucas County

Tom Morford Throckmorton, A.M., M.D.,
Chariton

Tom Bentley Throckmorton, B.Sc., M.D.,
Des Moines

(Continued from last month)

Dr. Tom Morford Throckmorton

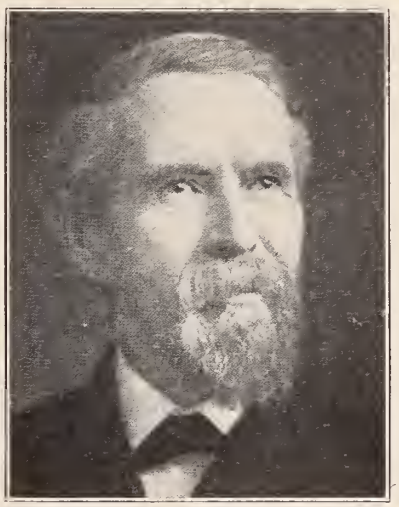
Any attempt to write a biographic sketch of one so dear to the author as his father, is, to say the least, fraught with great difficulty and considerable misgiving. The close personal contact I had with my father from early childhood days through mature years, affords me an insight into his family life and professional career that is not offered to every son engaged in the practice of medicine. It makes the written word in the drawing of the pen picture, somewhat difficult in regard to proper proportion and perspective. To have been raised in the home of a country doctor has been the lot of many men. Some of them followed in the footsteps of their progenitor. Such persons need no introduction to the value of such an environment and its influence in shaping their careers. I have always considered it one of life's greatest assets to have been reared among such surroundings; and it is with peculiar filial affection that I pen these lines about one who has always been my ideal of the now almost extinct country practitioner and family doctor.

Throckmorton was the son of John and Nancy (Lazear) Throckmorton. He was born in



Tom Morford Throckmorton, M.D.
1852—

Waynesburg, Greene County, Pennsylvania, April 5, 1852. His father came to Lucas County in the autumn of 1854, and entered several hundred acres of land in Warren and Union townships. This land he purchased from the government for one dollar and twenty-five cents an acre. The fol-



William Simpson Throckmorton, M.D.
1838-1918

lowing year he again returned and, during his stay, he built a log cabin and put in a crop of sod corn. In the spring of 1856 the entire family emigrated to its new home in the west. The trip was made by boat from Wheeling, West Virginia, to Keokuk, Iowa; thence by stage coach to Chariton, where the newcomers arrived April 16.

There were no schools in the rural community. Young Throckmorton was obliged, therefore, to begin his schooling in a "subscription school" which was opened in a log house. Later he attended the public schools in Chariton, when the family made that town its residence for a short time. In 1867, he enrolled as a student in the Garden Grove Seminary in Decatur County. With this smattering of preliminary education he turned his footsteps eastward to his native state and, in 1872, entered Waynesburg College, Waynesburg, Pennsylvania. From this institution he afterwards received his Master of Arts degree.

In October 1873, Throckmorton began the study of medicine under the preceptorship of his uncle, Dr. William Simpson Throckmorton, a graduate of the Jefferson Medical College of the class of 1865, who was then located at Nineveh, Greene

County, Pennsylvania. This uncle was the first of the Throckmortons to enter the field of medicine. Greene County was his native soil and Waynesburg College was the acme of his scholastic attainment. Following his graduation from that institution, he, fortunately, came under the influence of Dr. D. W. Braden, a local physician in Waynesburg. At that time many doctors there, and doubtless others elsewhere, were inclined to be desultory and alcohol imbibing individuals. Realizing the sterling qualities of young William, the good doctor, who was clean of habit and character and an upright Christian gentleman, felt that more such young men were needed in the profession and he accordingly urged him to take up the study of medicine. The result was that William Throckmorton accepted the advice of Dr. Braden and began the study of medicine under his tutelage. In those days it was a preliminary requirement for one contemplating a later entrance in a medical college, to first pursue his studies under a preceptor for at least two years. During this probationary period, the novice investigated the standard works on anatomy, physiology, chemistry, materia medica, practice of medicine, obstetrics and surgery, reading the lessons assigned and making verbal recitations to his teacher as opportunity afforded. Sometimes the occasion would be afforded while in the doctor's office; sometimes while accompanying him on his trips through the country. When more proficient, the student was allowed to assist in the making of the various powders, pills and decoctions, so important in that day; although many times in the rush season the good doctor's wife was forced to compound and prepare the doctor's medicines during his absence from home or during those fleeting hours when he was snatching a much needed rest.

During two years of intensive premedical training under his uncle's careful supervision, in addition to his studies, Throckmorton helped about the office, cared for the teams, mended the harness, greased the gigs, and blacked his preceptor's boots. Thus prepared, he went to Philadelphia to matriculate in the Jefferson Medical College. During his student days he saw no nurses about the hospital; orderlies waited on the professors and cared for the clinical cases. Laudable pus was the desire of every surgeon for it was thought that without it no wound of any consequence could properly heal. Not once did he see a laparotomy performed or a joint explored. These were forbidden surgical fields. Appendicitis was unknown; but peritonitis, inflammation of the bowels, and perityphlitis were household names among both profession and laity. Powdered opium, pushed to its full effect, was the drug *par excellence* and the sheet anchor for both doctor and patient in severe abdominal cases.

A flowing beard, a Prince Albert coat and a high silk hat were just as essential to the old time doctor as were his saddlebags and amputating outfit. However Throckmorton, the student, was interested in none of these. Fate had a hand in, and was largely responsible for, his acquiring a beard. Having suffered from repeated attacks of sore throat, he consulted Prof. Ellerslie Wallace, who was then holding the Chair of Obstetrics in the college. To his surprise, the professor recommended that he allow his beard to grow. As a result of this prescription, a hirsute growth soon adorned the face of the complainant. To his everlasting joy, the therapy worked and he remained free from his former vexatious ailment.

March 10, 1877, was an eventful day in Throckmorton's life. On that day he received his diploma from the Jefferson Medical College and honorable mention for "excellency in bandaging." The graduation exercises were held then, as they have been since, in the Philadelphia Academy of Music, at Broad and Locust streets. Armed with a full set of whiskers and a diploma, he immediately returned home and opened an office in Derby, a small town in Union township which had sprung into existence following the building of the branch railroad from Chariton to Saint Joseph, Missouri. Here, in this small country town and surrounding territory, he carried on an active practice. Office hours by appointment were unknown. Specialization in medicine had not yet come into vogue. The doctor was expected to do everything necessary for the patient's welfare from extracting teeth to amputating extremities. How marked a contrast is this to our present-day situation with its so-called "high cost of medical care" and the assertion that it takes seven specialists to make one family doctor.

Desiring a broader field for medical practice as well as better educational facilities for his children, Throckmorton left the field of his early medical activities and moved to Chariton, in August, 1888. Here, in the spring of 1890, he erected a frame building twenty feet wide and twenty-four feet long, on a lot located one-half block south of the southeast corner of the town square. I distinctly remember the building of this office. Its interior was divided into four rooms; a reception room or waiting room, a nicely carpeted and furnished consultation room, an examining room, and last, but by no means least, the drug room. Here a combination of various odors smote one's nostrils, none of which was predominating unless perhaps that one which emanated from a bottle which bore the label "Ammonium

Valerinate." This truly was a much used drug for not only was the prescriber well aware of what he was giving, but the recipient as well as the entire household were also made conscious that



Dr. Throckmorton as he appeared in the early nineties. Horse and cart were the chief means of travel.

the doctor had given something both powerful and potent, if the odor of the medicine was any criterion of its efficiency. In the examining room was a closet—a veritable chamber of horrors to the imaginative, be he young or old—for here in peaceful quiescence hung "Yorik," the articulated skeleton. Although an addition was built to the original office in 1909, its appearance was practically unchanged; and the building, used as an office for over forty years, remains standing today.

Soon after coming to Chariton, Throckmorton was elected county physician and coroner of Lucas County. Sometime later he became secretary of the United States Examining Board for Pensions, a position which he filled for many years. In fact it was while he was serving in this capacity that I had my first introduction to medical nomenclature. Finding that I was adept in using the typewriter, my father persuaded me to type the pension reports which he prepared from the findings of the board. Being anxious to make a little spending money, the offer was not an adverse one, although I have since suspected that it was made largely as a means of interesting me in things pertaining to medicine. I recall vividly one old soldier's complaint upon which he based his hope for increase in pension: "Eyes water when in wind." Another applicant insisted that he was entitled to more than ordinary consideration not only by the board but by the Pension Bureau at Washington as well because at times his "piles came down and bled like a stuck hog." I wonder if any physician, now confronted with pension board problems, ever hears similar reasons given by the veteran in his endeavor to secure governmental aid?

In spite of an increasing practice and family, Throckmorton managed, with a fair degree of regularity, to attend medical meetings and to go away for an occasional postgraduate course. He joined the Iowa State Medical Society at the time of its annual meeting in Creston in 1895. He served as its councilor for the eighth district for one term, many years ago. He also served as president of the Lucas County Medical Society, and of the Des Moines Valley Medical Association. He likewise held membership in the Medical Society of Southeastern Iowa, the Medical Society of Southwestern Iowa, the old Tri-State Medical Society and the American Medical Association. While never of a pronounced literary turn of mind, he enjoyed reading good medical books and journals and it often was remarked of him that he was the best read doctor in the community. He enjoyed his attendance at medical meetings, and usually returned from them with increased knowledge with which to serve his patients. For years he served as local surgeon for the Burlington railroad and was a member of the Railway Surgeons Association.

One of the trying cases that came under Throckmorton's care during his early practice was that of a man who, during harvest time, jumped from a threshing machine and fell against a pitchfork which a fellow workman had left standing in the ground. The fork handle, which struck the perineum of the man, entered the bowel for a distance of fourteen or sixteen inches, perforating the rectum and bladder in its passage. Throckmorton was summoned to aid the injured man and, realizing the seriousness of the accident, called Dr. Charles Fitch, of Chariton, in consultation. The elder surgeon questioned the advisability of any operative interference stating that, regardless of anything that one might do, the man would surely die. In spite of such an adverse prognosis, the younger physician felt that the patient was entitled to a chance. Accordingly, as best he could by the anal route, he sutured the rent in the bladder and rectal wall. An in-dwelling catheter was left in the bladder. The bowels were securely locked and pain was assuaged by sufficient doses of powdered opium. Heat, in the form of stupes, was applied to the abdomen which became greatly distended. The postoperative period and convalescence of the patient were stormy. The first alvine evacuation occurred on the sixteenth day. Grains of sweet corn were voided later per urethra. In spite of the evident fistulous opening between the bladder and bowel, Dame Fortune smiled on the young surgeon, and eventually the patient recovered with normal use of the injured parts. He is still living in Lucas County.

Obstetrics was a branch of surgery that proved to be of great importance in an early day. Lying-in hospitals and maternity wards were unknown. The old dictum about fractures—"splint them where they lie"—likewise was applicable, with slight modification, to the parturient woman who must be cared for ofttimes under the most trying surroundings. In many instances the first warning given a physician of a confinement case, was the summons to make great haste to the bedside of some woman then in active labor. Perhaps, after making a call on some individual afflicted with a contagious disease, such as scarlet fever or erysipelas, the doctor was ushered next into the presence of a parturient patient. Is it not to be wondered that so little puerperal infection, gathered breasts, increased infant mortality and other distressing complications arising as the result of parturition, actually occurred under such adverse conditions as existed half a century or less ago? The remarkable record of a single maternal death—which occurred from influenza sixteen days after delivery—was made during the fifty odd years of obstetric practice which Throckmorton conducted in Lucas County. He attributes his results in this field of medicine to the dictum of his teacher Prof. Ellerslie Wallace, who, early and late, in season and out of season, insistently and persistently, taught that "meddlesome mid-wifery was bad" and "if all was well to let nature take its course."

Roads, such as they were prior to the advent of the automobile, had no bottom following the spring thaw. During the hot summer months the dust, which arose behind the moving team and buggy, was not unlike the cloud which led the children of Israel by day. In this connection I well recall an incident which occurred during the spring of 1911.



Team and buggy of a county doctor

The melting snow and the rains had made travel overland almost impossible. My father had a patient, whom he was obliged to see, living north of Lucas. I accompanied him on the trip. It was all the team could do to pull the buggy through the mud. Going down a steep clay hill in the



Dr. Throckmorton as he appears today at the age of 81

Whitebreast creek region, the mud began to roll up on the wheels to such an extent that it scraped against the buggy bed. The load was so great that it seemed as if the team, in its effort to make progress, would surely break the swingletree or pull the traces apart. Finally the team could go no farther; so I was obliged to get out of the buggy and scrape the mud from the wheels before we could proceed on our journey. Father remarked at the time that, in all of his experience in country driving, this was the first time he ever was stalled *going down a hill* because of mud locking the wheels of his buggy.

Throckmorton's home life was ideal. His wife and children held first place in his heart; then came his profession with its exacting duties; and, finally, his church obligations. He never was so much a professor of his works as he was a doer of deeds. When once he made a close friend it was usually for life. He never betrayed the trust and confidence of his patients. In church affiliation he is a stanch and devoted member of the Methodist Episcopal Church. His activities in civic life were not numerous because of the handicap of his profession. He served on the Board of Education; also, he was the medical representative of the Draft Board for Lucas County during the World War. He holds membership in Chariton Lodge No. 63, A. F. and A. M., and in Des Moines Consistory No. 3.

In August, 1878, he was married to Miss Mary Ann Bentley, the daughter of John A. J. and Annie (Scott) Bentley. To this union were born three sons and three daughters: Charles Gross,

Maud Morford, Jeannette Franc, Tom Bentley, Daisy Ann and Scott Lazear. Every child received a college education and, in addition, Jeannette, Tom and Lazear followed in the footsteps of their father by entering the medical profession.

In January 1920, while making a call, Throckmorton had the unfortunate experience of slipping on ice. The fall which resulted produced an intracapsular fracture of the right femur. The effects of the injury were far reaching and brought about a permanent disability. Nevertheless the insistence of old patrons that he still continue to care for them was so great that he was obliged, when up and about again, to keep his office open. This he did until a few years ago. But again Fate decreed that his activities should be curtailed. On March 29, of the present year, he tripped and fell, fracturing his left patella. Thus, with both lower extremities badly incapacitated, his remaining days are not of the brightest outlook, yet withal, at eighty-one he appears hale and hearty. He has taken a keen delight in assembling the data pertaining to the History of Medicine in Lucas County. T. B. T.

(To be continued next month)

OBITUARIES

HENRY R. PASCOE, M.D.
1877-1933

Henry R. Pascoe was born at Cuba City, Wisconsin, November 28, 1877, and died in St. Anthony's Hospital at Carroll, Iowa, July 7, 1933. When he was but an infant his parents came to Carroll County, and his father was one of the organizers of what is known as the Beulah District, which, for more than fifty years maintained its unity in Carroll Township, southwest of Carroll. He grew up on the farm, attended school in the county and was graduated from Simpson College. He taught school for sometime before entering the medical department of Northwestern University, from which he was graduated in 1906.

His first few months of practice were at Grinnell, Iowa. It was while there that he married Miss May Larimer, who survives him. Three children, Paul, Phyllis and Edith were born.

It is doubtful if any person ever came nearer fulfilling the scripture, "He that loseth his life shall preserve it," than Dr. Pascoe. Easily a leader in his own profession, he also possessed those rarer qualities of personality that can never be forgotten. His was a deeply religious background with no taint of fanaticism, but characterized by tolerance and sympathy. He was one of the most universally loved and respected persons in his community.

Dr. Pascoe was a great lover of music and was gifted with a fine tenor voice, which had been heard for years in a male quartet, of his own organizing. His funeral music was furnished by the other three members of the quartet.

Dr. Pascoe was a past president of the Carroll Chamber of Commerce; a director in the Commercial Savings Bank of Carroll, and was actively identified with all the Masonic bodies, which he greatly admired. No public interest ever found him outside its ranks, for his great soul would always be identified with any proposal for the benefit of the public.

He was not only typical; he was the type itself, of the kind of physician about which stories have been written, legends formed and great practices built. He commanded the respect and admiration of his professional associates because his was the voice of calming and soothing power. His passing was mourned by people in every walk of life, from the very lowest to the very highest.

In the practice of medicine he possessed a rare combination of theory and judgment. No development in his profession was without his counsel and guidance and no case ever appeared to impress him as insignificant. He contributed to his practice that most appealing, perhaps, of all the physician's attributes, aside from skill—sympathy.

A great personality has gone in the passing of this superior physician, whose rank as a diagnostician, has long since been highly established. The good he did will live in the characters of the recipients and his memory will not be effaced. The "works he did live after him." His was indeed a "Symphony of Life."

Rev. Claude R. Cook, Pastor,
Methodist Episcopal Church.

ROCKY MOUNTAIN SPOTTED FEVER IN IOWA

(Continued from page 471)

pendent upon further study and observation of such cases as may occur.

A vaccine, prepared from tick virus, is manufactured at the United States Public Health Service laboratory in Hamilton, Montana. This vaccine is available to physicians without charge, but is of no value after the patient has been exposed or developed the disease. The vaccine is difficult and expensive to produce, must be repeated each year and its use has thus far been largely confined to laboratory workers.

REFERENCES

1. H. T. Ricketts: Contributions to Medical Science.
2. R. R. Parker: Arch. Path. xv, 398 (March) 1933.
3. Public Health Reports. (Current Issues.)
4. Dyer, Rumreich and Badger: Jour. Am. Med. Assn., xcvii, 589 (August) 1931.
5. Rumreich, Adolph S.: Jour. Am. Med. Assn., c, 331 (February) 1933.

PREVALENCE OF DISEASE

	June '33	May '33	June '32	Most Cases Reported from
Diphtheria	22	29	31	Polk, Woodbury
Scarlet Fever	49	104	158	Polk, Woodbury
Typhoid Fever	9	6	5	Cherokee
Smallpox	45	104	65	Linn, Clinton
Measles	194	319	18	Pottawattamie, Des Moines
Whooping Cough	89	70	43	Boone, Woodbury
Cerebrospinal Meningitis	2	4	2	Audubon, Woodbury
Chickenpox	80	185	95	Woodbury, Story
Mumps	128	414	71	Des Moines, Johnson
Poliomyelitis	3	0	0	Des Moines, Lyon, Polk
Tuberculosis	32	46	44	(For State)
Rocky Mountain Spotted Fever	2	0	0	Fayette, Washington
Undulant Fever	24	18	10	Pottawattamie, Polk
Syphilis	215	188	218	(For State)
Gonorrhea	224	176	301	(For State)

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

DIET IN SINUS INFECTIONS AND COLDS—By Egon V. Ullmann, M.D., formerly special lecturer for biology at the Oregon State College. Recipes and Menus by Elza Mez. The Macmillan Company, New York, 1933. Price, $2.00.

FRACTURES—By Paul B. Magnuson, M.D., Associate Professor of Surgery, Northwestern University Medical School, Chicago. 317 illustrations. J. B. Lippincott Company, Philadelphia, Montreal and London, 1933. Price, $5.00.

MEDICAL CLINICS OF NORTH AMERICA—(Issued serially one number every other month.) Volume XVI, No. 5. (Baltimore Number, March, 1933). Octavo of 257 pages with sixteen illustrations. Per clinic year, July 1932 to May 1933. W. B. Saunders Company, Philadelphia and London. Price, paper, $12.00; cloth, $16.00.

MEDICAL CLINICS OF NORTH AMERICA—Mayo Clinic Number, May, 1933. Volume XVI, No. 6. Index Number. Per Clinic Year, July 1932 to May 1933. Octavo of 239 pages with 28 illustrations. W. B. Saunders Company, Philadelphia and London, 1933. Price, paper, $12.00, cloth, $16.00, net.

MEDICAL CLINICS OF NORTH AMERICA—Volume XVII, No. 1. Issued serially, one number every other month. New York Number, July, 1933. Octavo of 324 pages with 64 illustrations. Per clinic year, July 1933 to May 1934. W. B. Saunders Company, Philadelphia and London, 1933. Price, paper, $12.00; cloth, $16.00 net.

OPERATIVE SURGERY, VOLUME VII—By Warren Stone Bickham, M.D., and Phar.M. (Tulane), M.D., (Columbia), F.A.C.S., Former Surgeon in charge of General Surgery, Manhattan State Hospital, New York; and Calvin Mason Smyth, Jr., B.S., M.D., F.A.C.S., Assistant Professor of Surgery, Graduate School of Medicine, University of Pennsylvania. Includes general index to complete work, Volumes I to VII, 849 pages with 765 illustrations. W. B. Saunders Company, Philadelphia and London, 1933. Price, cloth, $10.00.

SENILE CATARACT—METHODS OF OPERATING—By W. A. Fisher, M.D., F.A.C.S., Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College, formerly Professor of Clinical Ophthalmology, University of Illinois. 267 pages, 183 illustrations, 112 of which are colored. Published by the Chicago Eye, Ear, Nose and Throat College, Chicago, Illinois.

SURGICAL ANATOMY—By C. Latimer Callander, A.B., M.D., F.A.C.S., Assistant Clinical Professor of Surgery and Topographic Anatomy, University of California, Medical School. With a foreword by Dean Lewis, M.D., Sc.D., LL.D., F.A.C.S. 1115 pages with 1280 illustrations, some in colors. W. B. Saunders Company, Philadelphia and London, 1933. Price, cloth, $12.50, net.

SURGICAL CLINICS OF NORTH AMERICA—Volume XIII, Number 3, Lahey Clinic Number, June 1933. 275 pages with 98 illustrations. Per clinic year, February 1933 to December 1933. W. B. Saunders & Company, Philadelphia and London, 1933. Price, paper, $12.00, cloth, $16.00 net.

SURGICAL PATHOLOGY—By William Boyd, M.D., Professor of Pathology, University of Manitoba; Pathologist to the Winnipeg General Hospital, Winnipeg, Canada. Third edition, thoroughly revised, 866 pages with 477 illustrations and 13 colored plates. W. B. Saunders Company, Philadelphia and London, 1933. Price, $10.00 net.

BOOK REVIEWS

CERVICO-VAGINITIS OF GONOCOCCAL ORIGIN IN CHILDREN

Report of a project of the Bellevue-Yorkville Health Demonstration, New York City. By Walter M. Brunet, M.D., Dora M. Tolle, M.D., Sara Alicia Scudder, and Anne Ruth Medcalf. 97 pages.

This report describes the detailed and painstaking investigation of a troublesome health problem, carried on over a period of four and a half years by the Bellevue-Yorkville Health Demonstration, New York City, and financed by the Milbank Memorial Fund. Agencies dealing with girl children had felt acutely the need for fuller information about certain aspects of vaginitis, a problem of medical, sociologic, sanitary and economic importance.

A far-reaching program was outlined providing for a study of the clinical, bacteriologic and sociologic methods of diagnosis and procedure; comparative methods of treatment; laboratory technic; social service and follow-up; and history forms for medical and social data.

The objectives of the study were briefly as follows: (1) to study each individual case in its entirety, including a complete physical examination; (2) to determine if possible the cause of local conditions, evaluating the clinical, pathologic and bacteriologic findings; and (3) to compare the methods of treatment and secure a complete sociologic picture and examination of contacts.

Of 241 children selected for intensive study, 192, or 79 per cent, were judged to have positive clinical gonorrhea. The full and detailed account of the study as it was carried out is of importance to every one concerned with any phase of clinical medicine and public health—to the general practitioner, the pediatrician, the gynecologist and the bacteriologist.

CHARACTER IN HUMAN RELATIONS

By Hugh Hartshorne, Ph.D., Columbia University, Research Associate in Religion, Yale University. Charles Scribner's Sons, New York and London, 1932. Price $2.50.

This book deals, primarily, with the many factors involved in the development of character, especially in relation to the agencies and facilities associated with the public schools system and the various branches of social science operating in most communities. The first section deals exclusively with the collective efforts in character development now being conducted by the more or less public agencies, while the second section is devoted to the theoretical consideration of the factors involved in, and implied by, the term character. In the two concluding sections, the author explains the operation of human behavior characteristics essential to the study of character, and presents a study of the methods and organization now available and utilized for obtaining the end of character development. Physicians will be particularly interested in those phases of the treatise in which the author discusses the agencies allied to, or operating in conjunction with, medical clinics or mental hygiene clinics.

COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION

Volume XXIV, 1932. Edited by Mrs. Maud H. Mellish-Wilson and Richard M. Hewitt, B.A., M.A., M.D. Octavo of 1205 pages with 233 illustrations. W. B. Saunders Company, Philadelphia and London, 1933. Cloth, $11.50 net.

The Collected Papers of the Mayo Clinic have, during the past two decades, assumed a position of such paramount importance in medical education and literature that detailed discussion seems superfluous. In the current volume, 99 papers are reprinted in full, 22 are abridged, 36 are abstracted and the remaining 327 are cited by title only. The contents are listed under the titles of alimentary tract; genito-urinary organs; ductless glands; blood and circulatory organs; skin and syphilis; head, trunk and extremeties; chest; brain, spinal cord and nerves; radiology; anesthesia and gas therapy; technic, and miscellaneous. This statement will give the reader some insight into the broad character of the subjects treated. The present volume maintains the same high standards previously established by this outstanding classic of medical literature.

DIETETICS FOR THE CLINICIAN

By Milton Arlanden Bridges, B.S., M.D., F.A.C.P., Associate in Medicine at the New York Post-Graduate Medical School, Columbia University, in collaboration with Ruth Lothrop Gallup, dietician, with a foreword by Herman O. Mosenthal, A.M., M.D., Director of Medicine at the New York Post-Graduate Medical School, Columbia University. Octavo, 666 pages. Lea & Febiger, Philadelphia, 1933. Price, cloth, $6.50.

During the past few years, dietetics in the practice of medicine has been given a position of greater importance and, for this reason, a number of well written books on this subject have appeared. Many of these volumes have been written with a limited or special class of patients in view. The volume under discussion is one of the most complete which has come to the reviewer's attention. It is outstanding not only because of its completeness, but also because of the thoroughness with which the recent literature has been reviewed and the newer developments in dietetics incorporated in the text. It has been written especially for the general practitioner and the hospital interne, but since the material offered is not only physiologically sound but also essentially practical, the volume commends itself to every worker in the field of medicine, regardless of his specialty or limited interests. In presenting the subject, the author has discussed not only the physiology of digestion and the food requirement for life and growth, but has extensively discussed the foods themselves and their special characteristics, and provided numerous recipes and diets for various diseased conditions. Over eighty-five per cent of the page space is devoted to the clinical discussion of diets and their application in specific pathologic states of the body.

THE ELEMENTS OF MEDICAL TREATMENT

By Robert Hutchison, M.D., F.R.C.P., physician to the London Hospital and to the Hospital for Sick Children. Second Edition, William Wood and Company, Baltimore, 1933. Price, $2.00.

This small text appears as the result of requests received by the author for printed copies of a series of lectures given before his medical classes. These lectures are here presented with only the alterations required to make them suitable for publication.

While only a limited number of medical conditions are discussed and many of these are discussed with great brevity, the book will be found especially useful by the newer graduates in medicine, especially those who have devoted but little time or attention to the use of drugs and prescription writing.

It is the reviewer's opinion that the average physician will find something in each section of the book which will be useful in his daily practice, and for this reason the volume will appeal to both the new and older graduates in medicine.

GASTRIC ANACIDITY, ITS RELATION TO DISEASE

By Arthur L. Bloomfield, M.D., professor of medicine, Stanford University, San Francisco, and W. Scott Polland, M.D., instructor in medicine, Stanford University, San Francisco. The Macmillan Company, New York, 1933. Price $2.50.

This volume reviews in detail the history and classification of gastric anacidity. Scientific criticism of the values and defects of various gastric meals is discussed and the usefulness of histamine as a gastric stimulant is stressed. Naturally the physiology and laboratory side of the subject is prominent.

Special chapters are devoted to the discussion of anacidity occurring in pernicious anemia, cancer, fevers and numerous other diseases. The authors quote from some of the original observations of Beaumont made on the celebrated and temperamental St. Martin.

The text is freely interspersed with tables, charts and graphs explaining and illustrating various phases of the subject. A quotation from the final chapter is worthy of note: "That anacidity is a precursor of, or the cause of, certain diseases is possible, but not finally proved by valid statistics. However, the association with pernicious anemia and cancer is so constant that a causal relation may be accepted until disproved."

The book which has an extensive bibliography merits our most earnest attention and study.

F. R. H.

INTERNATIONAL CLINICS

Volume II, Forty-third Series. Edited by Louis Hamman, M.D., visiting physician, Johns Hopkins Hospital. Octavo, 303 pages. Thirty illustrations, one colored plate. J. B. Lippincott Company, Philadelphia, Montreal and London, 1933.

That this volume will be of great interest and value to all physicians is demonstrated by the fact that complete monographs of some of the newer entities in medicine are included. Hyperinsulinism, first recognized by Harris ten years ago, is fully discussed by a recognized authority and experienced observer in metabolic diseases. Pulmonary hypertension, a condition rarely diagnosed, is fully discussed and illustrative cases are presented. Circulatory diseases are stressed in this volume, including symposia on diseases of the coronary arteries, dyspnea, cyanosis and edema, as well as the causes, diagnosis, prognosis and treatment of hypertension.

Particularly striking is an essay discussing the proper standards in therapeutics, which exhibits a thoughtful and helpful attitude, particularly in the consideration of new and untried therapeutic procedures. The reviewer feels that the general practitioner especially will derive great benefit from its careful reading.

Roentgenology, surgery, clinical pathology, obstetrics and pediatrics receive due consideration in the volume. Certainly the first two numbers of the new series of the "International Clinics" have set a high mark of efficiency in bringing to the medical practitioner timely and complete information which he can use in his everyday practice.

MEDICAL STATE BOARD EXAMINATIONS

An organized review of actual questions given in medical licensing examinations throughout the United States. By Harold Rypins, A.B., M.D., Secretary, New York State Board of Medical Examiners. J. B. Lippincott Company, Philadelphia, Montreal and London, 1933. Price, $4.50.

Every physician who contemplates medical examination for licensure feels the need of some guide for his preparatory studies. For the assistance of such a candidate, several books have been devised. Some employ the question and answer method, while others, such as that under present consideration, discuss the subjects topically. In view of the fact that the average American medical graduate today is well prepared for the practice of his profession, it would appear that a book, briefly reviewing topically the various subjects of medical practice, would be of greater value than a mere recital of the actual questions which have been previously asked candidates for license.

The present volume covers the essentials, both of the so-called fundamental sciences and the various fields of the practice of medicine and surgery, omitting technical procedures, materia medica and prescription writing, since it is the author's conviction that these subjects must be learned from actual practice and are not subject to epitomization. The ample index will be of assistance to the physician employing this book in locating special sections to which he desires to direct his attention.

OBSTETRICS AND GYNECOLOGY—VOLUME 1

By eighty leading specialists. Edited by Arthur Hale Curtis, M.D., Professor and Head of the Department of Obstetrics and Gynecology, Northwestern University Medical School; Chief of the Gynecologic Service, Passavant Memorial Hospital, Chicago, Ill. Complete in three volumes and separate desk index. 3500 pages with 1664 illustrations, many in colors. W. B. Saunders Company, Philadelphia and London, 1933. Price, per set, cloth, $35.00 net.

For the preparation of this encyclopedic treatise upon obstetrics and gynecology, eighty of the foremost authorities in these fields have contributed to the work. This treatise, rich in clinical experience and based upon both hospital and home treatment, will appear in three separate volumes, with a separate volume containing a desk index to the set.

In this, the first volume of the set, the anatomy, physiology, embryology, diagnosis and management of normal pregnancy and labor, are discussed, together with the pathology of pregnancy. The keynote of the volume is actual clinical practice and observations as distinguished from the various theories which have in many instances so largely filled previous volumes on obstetrics and gynecology. While many of the contributors are teachers, all of them are practical physicians, and as such have drawn liberally upon their wealth of experience for the discussions embodied in this work. In keeping with the high character of the text the illustrations are for the most part new, and all of them are of the best quality. Because of the large number of illustrations used, the volume becomes not only an encyclopedic discussion of obstetrics and gynecology, but also an atlas of the anatomic structures involved in these specialties.

No finer or more authoritative treatise of these subjects has appeared from the English press, and the reviewer heartily commends this work to every physician whose practice deals with these subjects.

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RADICAL GASTRIC SURGERY IN PEPTIC ULCER*

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I wish to present to you the subject of gastric surgery from the angle of radical surgery as a routine procedure. In many medical conditions we can say that we are familiar with the local lesion but not with the cause of the lesion. Thyroid disease presents a good example. Until recently we were totally ignorant of the nature of goiter. We looked upon it as a disease entity. Today we know it is the end result of an iodine deficiency. We are still in the same state regarding thyrotoxicosis that we were twenty years ago regarding the nature or underlying cause of goiter. It is true that we know a great deal about thyrotoxicosis. We know that the changes taking place in the gland are related to the clinical symptoms. However, we know nothing of the underlying nature of the disease which gives us the clinical picture we call thyrotoxicosis.

I am indebted to Gregory Connell for a quotation from J. A. Ryle to the effect that we should be interested in peptic ulcer, the disease, rather than peptic ulcer, the lesion.

We are familiar with the local lesion in peptic ulcer, with its pathology, its local changes, secondary changes and the accidents that go with it, and we are familiar with the clinical picture. Moreover, clinical medicine has made progress in the control of the lesion and the symptoms resulting from the lesion. All the studies of clinical and experimental medicine have led us nowhere as to the real cause. We know nothing of ulcer, the disease. Knowing nothing of ulcer, the disease, we yet have made very great progress in treating the disease. Treatment by the internist has resulted in the control of the patient's clinical picture in a very large proportion of the cases.

The surgical treatment which I wish to present to you is to be regarded as limited in its application to those cases that are resistant to adequate medical care. These include cases that are not relieved by medical care, or tend to recur; that are associated with complications of what ought to be termed a surgical character; particularly the cicatricial deformities that interfere with function; most deeply penetrating ulcers. Massive hemorrhage is not always a surgical indication; acute perforation is always a positive indication. A coincident major cardiac condition or a renal condition may be considered a contraindication. At times extreme age may be considered a bar. The coexistent condition may add unduly to the risk, or the life expectancy may not be great enough to justify any major surgery.

I wish to remind you that the surgical treatment of such ulcers as carried out by the usual methods of limited surgical attack is directed toward the same purpose the internist carries out very effectively. Both internists and surgeons who attack the ulcer as a local lesion aim to lower the acidity, to enable the stomach to empty more easily, and to deflect the current of gastric contents.

The gastro-enterostomies used for so many years have done very good work in these cases. The excision of ulcers with plastics on the pylorus has accomplished much. I wish to remind you, however, that in those cases which are not benefited by gastro-enterostomy, the patients are left in a condition more difficult to handle than before the operations. The internist's criticism has been that these patients present more difficult feeding problems than they did before operation.

Ulcers may be single or multiple. Scars in the mucosa may indicate that earlier ulcers have healed, and suggest that the patient may have had a series of ulcers during the course of his illness. Ulcers have healed, or been cured, only to be succeeded by a new ulcer or a crop of ulcers. The fact that this holds true after treatment by the internist and probably to a material extent after conservative surgical treatment, suggests to me that the underlying ulcer disease is capable of reproducing the local lesion whether it has been removed by the internist or by the surgeon, so long as the anatomic ulcer area remains.

It is quite impossible to evaluate the literature

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on the subject of ultimate results of gastric surgery because the reports of results are so variable. Excellent surgeons and clinicians have reported whole series of gastro-enterostomies and excisions of ulcers with results that are almost perfect, and yet if we study the literature carefully we will find equally excellent men who, studying their cases, say that they find too many patients returning with recurrent ulcer which is probably a recurrent lesion.

Before passing from the subject of local operative work, I wish to remind you that ulcer of the lesser curvature differs from that of the duodenum in that it tends to be more extensive, more inflammatory and ultimately to form cicatricial changes that are more damaging than those in the duodenum. In ulcer of the lesser curvature we often have no way of knowing from the clinical picture, from the roentgenogram, or on the examining table, whether we are dealing with an ulcer or a carcinoma. If that is true it must be illogical to excise ulcer of the lesser curvature. Gross excision leaves a handicapped stomach. If one cannot determine whether the lesion is ulcer or carcinoma, it is illogical to destroy the ulcer *in situ* without an opportunity to study it. Local operative work in ulcer of the lesser curvature is, I think, particularly illogical.

Many years ago, in my early days in surgery, the cavity of the gallbladder was commonly regarded as the seat of disease of the gallbladder and our treatment consisted of opening the gallbladder and inserting a drain. Today we realize that when we only drain the gallbladder we leave behind the organ which is the seat of the disease. Most surgeons today are agreed that removal of the gallbladder is the logical procedure.

May I point out to you that the segment of the gastro-intestinal tract, including the lesser curvature and the first portion of the duodenum, constitutes an organ analogous to the gallbladder. It is an organ, and whatever may be the underlying cause of ulcer, it manifests itself by a lesion in that structure. My suggestion is to regard that structure as the organ to be removed in the same manner as you would remove a gallbladder. It is an organ that can be sacrificed without any more damage to the body than sacrifice of the gallbladder, and its removal eliminates the opportunity or ability of the ulcer to reform.

Therefore, I present this operation not as a means of correcting over-acidity, or removing infection, or of doing any of those things that the internist accomplishes. I suggest it on a far more important basis, that of removing the organ in which the disease can occur. This operation accomplishes all of the other things; it enables the stomach to empty more easily; it lowers acidity. Current literature of today is paralleling very closely that of thirty years ago regarding gallbladder surgery. If you read the literature of the English speaking countries, you see altogether too much limited surgical work advised. We seem to be fearful of the more radical operation. We are afraid of it because it is a major operation, an operation which is on a par with and yet not more serious than surgery of the colon or common duct.

The removal of the stomach in this way has had its development along two lines. The Billroth I operation in which the end of the stomach was united with the end of the duodenum fell into disfavor for some time but has been taken up again recently. Haberer, one of the greatest surgeons in the field of gastric surgery, prefers the Billroth I operation. The second operation, in which a gastro-enterostomy is performed between the closed end of the stomach and the jejunum, has been modified in various ways by different surgeons. I have the feeling that the modified method of Polya and Finsterer is the ideal one. It has the logic I mentioned. It carries with it a reasonable mortality, higher than that of gastro-enterostomy or excision of the ulcer, pyloroplasty, etc. However, I believe its mortality is less than that of the minor operations if we include the mortality from recurrences, from secondary accidents, and from more extensive surgery later. With this type of operation we have an excellent function and we have few complications. A famous surgeon has said that the man who removes the whole stomach for a little ulcer would not be allowed to operate upon him. To remove two-thirds of the stomach for a small ulcer may seem illogical to you. That thought was answered very nicely by one of our Chicago men, Dr. Alfred Strauss, who called attention to the fact that if you have a crushed foot you do not painfuly save the heel and part of the tarsus but you sacrifice the heel and lower third of the leg to get a good functioning stump. That is what we propose to do. Only one-third of the stomach is left, but that one-third functions perfectly.

ANGINA PECTORIS*

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There is today a widespread interest on the part of the medical profession in the subject of angina pectoris. This interest is timely and appropriate because the malady has developed to an alarming extent, and its unfortunate victims each year are numbered by the thousands. It seems that almost

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daily our newspapers record the sudden death from heart disease of some one known to us, either personally or because of outstanding prominence in the financial, political, or academic world. Two recent victims of this dread scourge who occupied high positions in the affairs of our nation were Mr. Coolidge and Senator Walsh. Surely our profession must accept the challenge which confronts us, and in some manner put a check to the inroads which this devastating disease is making on the population of our country.

It is not the purpose of this paper to indulge in a prolonged dissertation on angina but rather to present in a brief manner the main features and symptoms of the disease, emphasizing the important points in diagnosis and treatment.

Our knowledge of angina pectoris began with Heberden's classic description in 1768, from which I wish to quote the following statement: "But there is a disorder of the heart marked with strong and peculiar symptoms considerable for the kind of danger belonging to it, and not extremely rare, which deserves to be mentioned here at length. The seat of it and sense of strangling and anxiety with which it is attended may make it to not improperly be called angina pectoris." The observation of this eighteenth century physician was so accurate and so complete that little can be added to the original description of the disease.

Thirty years later it remained for Edward Jenner to point out the frequent association of the syndrome with diseases of the coronary arteries.

Within the memory and experience of most of us angina pectoris was classed as a somewhat rare disease. Today it is encountered frequently and has surrendered the position it occupied as a disease which was more or less limited to the intelligentsia. In the past women have been infrequent sufferers from this disease, but recently they are showing a definite increase both in morbidity and mortality. Most observers credit this increase to woman's new freedom and her emergence on the commercial scene.

Angina pectoris is essentially a symptomatic picture, not a pathologic or even a clinical entity. The most important symptom of angina pectoris is pain. It is the chief characteristic and the most constant diagnostic feature of the picture. It is brought on by effort and usually ceases when the effort is discontinued. The effort may be only a slight exertion, but it is the unusual load put upon the heart which produces the spasm.

The nervous system plays an important rôle in the occurrence of angina pectoris. The individual attack is very often precipitated by emotional states, and it is a matter of record that the disease occurs almost exclusively in persons of an emotional type. Prolonged emotional stress is frequently a forerunner of the initial paroxysm, as well as a certain predisposing factor. The early students of the disease almost without exception mentioned this as a fact and they pointed out, more often than present writers, that it was in the nerve straining and emotional occupations that the syndrome most frequently developed.

The pain in angina pectoris is ordinarily severe in degree, but the intensity varies, not only in different patients but also in different attacks in the same patient. The most common point of origin of the pain is behind the sternum. It is almost invariably described by the patient as deeply located, and clutching or squeezing in character. It may begin as a dull heavy ache behind the manubrium at the ensiform, or at times be located at the gladiolus, passing upward, increasing in severity to an agonizing, clutching pain which is customarily reflected in some usual pathway. The onset may be sudden, like a severe blow in the chest; again the pain may be slight and amount to little more than a slight uneasiness in the sternal region. Epigastric pain is fairly common. In most cases there is a reflection of the pain and this generally occurs along certain definite paths.

Occasionally the pain follows certain nerve and vascular trunks but in other instances this course is not so apparent. The commonest avenue of reflection is into the left shoulder and arm. In these cases the basic pathology is usually found in the coronary vessels. Cases which are apparently based directly on aortic disease are more likely to show a reflection of the pain into the neck and the jaw.

As a rule the pain in anginal seizures is so severe that the patient presents a typical picture while the pain is in progress. The picture is so dramatic and startling in its appearance that it may be considered as highly diagnostic of the reality of the attack, a quite different condition from that which occurs in the numerous hysterical and other emotional attacks which simulate true angina pectoris. The patient in a paroxysm of true angina pectoris is inarticulate; he stands fixed or transfixed in his agony; he rarely even moans and he never seeks to express his agony in words or gestures; he is far too keenly occupied with his distress to attempt any theatrics at such a time. Whatever position he may be in when the attack seizes him, that position he maintains. The muscles are fixed; even the effort of lying down is seldom attempted if the attack occurs when the patient is standing. If seated, he remains so, and the muscles of the body are frozen in an apparent effort to limit the pain. The skin is gray in color and the whole picture is one of tremendous inarticulate agony.

Hand in hand with the pain in an anginal attack

is the factor of fear, which accounts for nearly as much of the suffering as the pain.

Harlow Brooks states: "Even educated physicians who have angina pectoris may be unable to describe this symptom (fear) adequately, but there is a sense of impending disaster of breathlessness, apprehension, melancholy and such emotional agony that the suffering is approximately as great as from the pain itself. No matter how accustomed the sufferer may be to his attacks, no matter how understanding he may be of them or how indifferent he may be to death, he is invariably terrorized by them."

During an attack the heart itself shows little or no evidence of damage or disorder, if examined by the usual methods. As a rule the stethoscope discovers no abnormality in those hearts previously known to be normal; there are no murmurs and usually no irregularities. The sounds may be somewhat distant but the rate is likely to be normal. The blood pressure may be slightly lowered or it may not be, but the vast majority of cases of this disease are definitely not associated with hypertension.

PRECIPITATION OF THE PAROXYSM

Probably the most common, certainly one of the most frequent excitors of an anginal attack is exercise. This is referred to by some cardiologists, notably Thomas Lewis, as angina of effort. Any unusual effort will precipitate an attack and the sufferer soon learns to recognize his capacity or tolerance for exercise. It may be walking up hill or against a stiff wind, climbing stairs or any one of many things which confront him in the course of the day's activities. The simple act of coughing or sneezing is sufficient to produce an attack, and straining at the stool has been known to be the cause of a seizure. The next most frequent cause is emotional stress or excesses. Anger, grief, and even those emotions connected with pleasurable sensations are most dangerous experiences for the patient with angina pectoris. Several years ago a gentleman of my acquaintance in this city died suddenly as a result of an angry outburst after a heated discussion with a member of his family.

PATHOLOGY

Although the clinical picture of angina pectoris is consistent in its character, it is a well known fact that there is no certain, constant and inflexible pathology back of the syndrome. All students agree that we are not dealing with a definite, specific disease in angina pectoris. Irrespective of its symptomatic identity we are certainly not dealing with a specific disease process but rather with a symptom complex which may be brought about by a highly diversified and variable pathology. Briefly then, as far as we now know, angina pectoris is not a disease but a symptom.

Heberden thought that the syndrome was produced by a true muscle cramp similar to that which occurs in voluntary muscles. There are still some advocates of this theory. Recent studies of the pulse would seem to disprove this theory. From these observations we know that the pulse shows no alteration or intermission during the attack.

The absence of cramps or spasms in the heart is also noted in recent electrocardiographic studies.

The theory of coronary involvement as a cause of the syndrome is much sounder, and yet on the other hand it is a fact that extensive coronary disease is not always associated with angina pectoris. Furthermore, it is known that complete blocking of a coronary vessel is often followed by a complete or temporary cessation of the angina attacks. Consequently it is evident that disease, slight or severe, resulting in strictures of the coronary lumen is not the entire pathology of angina pectoris. It is, however, undeniably the most frequent basic pathology. At the present time most students of the heart feel that anginal paroxysms are brought about in diseased coronary arteries by a spasm of the lumen. This latter theory has stood the test of time very satisfactorily and it has received strong corroboration from the fact that in so many cases the paroxysms may be terminated by administration of the nitrites which are vasodilators. Mackensie and others have argued that the ischemia which follows the arterial spasm with its consequent limitation of muscle nourishment was the cause of the attack. However, this theory seems somewhat untenable in the face of negative electrocardiographic findings during the paroxysm.

Many cases of angina pectoris which come to autopsy show extensive disease of the aorta and the particular type of aortitis which seems to be accompanied by angina pectoris exhibits the most damage in the first part of the vessel, in or about the sinus of Valsalva. It is at this point that the coronaries arise and inflammation here necessarily involves the mouth of the coronary vessels. It is conceivable that the coronary vessels themselves might be normal but if the heart is deprived of its nourishment through blocking at this source, by inflammation of the aorta, the balance of the picture is obvious.

Myocardial disease is the third pathologic condition which is associated with angina pectoris. This association has been noticed by many observers, and the disease may be either inflammatory or degenerative in type. Sir Clifford Albutt comments on the occurrence of angina pectoris following influenza and other conditions, notably rheumatic myocarditis. It is possible that angina

pectoris appearing in early syphilis may be due to the same cause. Some authors have treated the association of pericardial adhesions in angina pectoris, and Von Neusser reports a case of a patient who showed typical signs and symptoms of angina pectoris two years after an attack of rheumatism. An autopsy showed only adhesions between the heart and pericardium. The association of angina pectoris in syphilis has long been noted and the statement has been attributed to Osler that angina pectoris appearing under the age of 40 should be considered as syphilitic until disproved.

It would seem then that we can fairly definitely classify the pathology underlying angina pectoris as follows.

1. Cases caused by disease or spasm of the coronary arteries.

2. Cases caused by aortitis chiefly involving the first portion of the aorta.

3. Cases caused by diseases of the myocardium.

Many times these three factors are associated as aortitis with coronary disease; or all three are combined, as in syphilis or rheumatism. It is obvious that all of these lesions may exist, and they frequently do, without causing angina pectoris, but they never exist without at the same time harboring the menace of sudden death.

Huchard is said to have collected forty-seven different explanations of the mechanism of symptom production in angina pectoris. Needless to say it is unnecessary to interest ourselves in these at this time. From the standpoint of the every day practice of medicine the most important concept for the physician to bear in mind is that this complex has a definite though varied basis in real cardiac pathology. As stated earlier in the paper, the preponderance of evidence at this time as to the etiology of angina pectoris is in favor of the theory that all true cases of the disease have a distinct pathology located either in the first portion of the aorta, in the myocardium or in the coronary arteries. In point of frequency the last mentioned seems to be the most important. Pericardial disease through extension to the root of the aorta or an involvement of the myocardium may conceivably produce a pathology sufficient to account for angina pectoris, and this should not be ignored.

Yet when all is said and done we are forced to admit the awkward fact that the pathologic changes just mentioned are not, in and by themselves, sufficient to cause the symptom complex of angina pectoris. This is evidenced at necropsy when diseased coronary arteries and damaged myocardia have been found in patients, who in life never suffered the agonies of angina pectoris. Hence arises the question; why do some of these cases develop this condition while others with precisely similar pathology fail to do so. This question has perplexed medical men ever since the days of Heberden and Jenner, and at this date we are still groping. It is verily another Riddle of the Sphinx.

Harlow Brooks offers a theory which has an air of plausibility to it and which may possess merit. He says that angina pectoris is curiously a disease of the more highly organized persons, occurring almost exclusively in highly emotional and nervously sensitive persons. The attacks are precipitated not only by physical stress, but notably by nervous and emotional factors. Therefore, in addition to a basic cardiac pathology it is also necessary that a sensitive nervous arc which must include the higher psychic centers be present for the development of the syndrome. The heart itself is largely insensitive to pain, but through its sympathetic connection to the spinal cord and its pain sensitive cells, the other phase of the chain is supplied. Both are necessary to the development of angina pectoris; a cardiac pathology which is a menace to life, plus a resulting and probably protective sensitized nervous arc which makes the patient aware of his circulatory defect and warns him against those conditions which threaten his life. This is an interesting theory based on the well known protective character of pain. Should it be true, however, it would seem to nullify the value of the recently devised operation of sympathectomy for the relief of angina's most terrible symptom.

DIAGNOSIS

As a rule the diagnosis is not difficult. The sudden onset of pain, its peculiar location and radiation, its intensity, the appearance of the skin, the accompanying anxiety and fear, all tend toward the delineation of a picture which is unique in medicine.

An absolute diagnosis should not be made unless the patient is seen in an attack, for of all the diagnostic findings, the most conclusive is the appearance of the patient during the paroxysm. Once seen, the condition can scarcely be mistaken for anything else but angina pectoris.

TREATMENT

Although angina pectoris is one of the most serious cardiac maladies, which renders life so uncertain, it is not proper to regard the diagnosis of this disease as equivalent to a death sentence. Many men who occupy important positions in the professions or in public affairs and who suffer from this affection continue to carry on their work in a most effective manner for very considerable

periods of time, so that the conduct of cases should start out on the key of relative optimism. Lewis states that the average length of life after the onset of symptoms is about six or seven years, although he admits that the duration is variable and that some greatly exceed this figure. The basic principle in treatment is that the patient should live within the limits of his pain. Outdoor life is desirable and should be encouraged, but it should always be of such a nature and extent as not to induce pain. If pain appears, immediate rest should be taken. The patient may proceed after the pain has subsided, but at a slower pace.

Patients suffering from angina pectoris should retire early and arise late. At no time should they indulge in anything of an exciting nature, either mental or physical. Diet should be light, nutritious and easily digested. Stimulants should be used sparingly or better still, not at all.

As a rule, the treatment of the paroxysm is best handled by the use of nitrites, mainly amyl nitrite. Small capsules of this drug containing two to five mm. can be carried by the patient ready for instant use. Alcohol is also effective in controlling attacks but there are various reasons why its use is not altogether practical. Nitroglycerine is a useful drug at a later stage of the disease when the prevention of attacks has become important in a patient who has become incapacitated for exercise. In doses of gr. 1/100 taken every half hour for several hours, this drug produces a state of vascular relaxation which insures the patient a period of physical calmness. Theobromine may be used in doses of 10 grains three or four times daily with the same result. Ammonium bromide and luminal can also be given, if needed, and morphine can be used if indications seem sufficiently severe.

In the past few years surgery has brought relief to some patients suffering from angina pectoris. Removal of the sympathetic ganglia at the base of the neck has produced satisfactory results in some instances. The operation is not to be undertaken lightly but is limited to those intractable cases where severe pain is a daily matter despite the use of all other remedies.

As stated at the outset of this paper, our profession stands today squarely facing the problem of providing an answer for the constantly mounting death rate of this dread disease. Through the efforts of numerous zealous and self-sacrificing workers, many of the infectious diseases which scourged previous generations have been met and conquered. Now a new foe enters the lists and once again the science of medicine is called upon to gird itself and go forth to battle with its new opponent. Humanity will anxiously await the outcome of the struggle.

THE ELECTROCARDIOGRAM AND ITS RELATION TO THE DIAGNOSIS AND PROGNOSIS OF ANGINA PECTORIS AND CORONARY OCCLUSION*

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It is generally agreed that electrocardiography has established a definite place for itself in clinical medicine. The clinical examination still surpasses the machine in most heart affections, but in recognition of the irregularities of the heart beat, the machine is first. A thorough examination requires the employment of both methods. It will be my aim to limit my discussion to a few of the fundamental principles of electrocardiography and, in particular, to the part the electrocardiogram plays in the diagnosis and prognosis of angina pectoris either in the presence or absence of coronary heart disease.

Electrocardiography had its inception when Einthoven of Leyden introduced the string galvanometer in 1903. Muller and Kolliker, using the heart of a frog, demonstrated in 1856 that the contraction of the heart was accompanied by a difference of electric potential. Waller, working in his experimental laboratory in 1887, demonstrated that these differences of potential could be recorded by means of a capillary electrometer if proper contact could be made between the wires of the electrometer and any two areas of the body which included the heart between them. As time went on, a very sensitive electrometer was developed so that today we have at our disposal in the modern electrocardiograph an accurate means of studying the various heart disorders by graphic records. These graphic records have placed the question of cardiac irregularities on a rational basis. They have aided greatly in the diagnosis of heart conditions and have made possible a more exact prognosis in heart disease, with the result that treatment can be carried on more judiciously. I would not have you believe that a proper diagnosis cannot be made without electrocardiographic studies, but this fact would not be opposed to giving this laboratory procedure a place in clinical medicine. Experience has taught us that it should always be used in conjunction with other clinical methods, as in the case of other laboratory methods, and that one should not make a positive diagnosis from electrocardiographic findings alone. By no means does it replace the customary methods of history taking, percussion, auscultation and roentgenology in making a diagnosis. Since a perfectly normal electrocardiogram may be obtained

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in the presence of serious heart disease, the method must be considered as merely helpful and supplementary. It does frequently, however, reveal pathologic heart conditions which cannot be demonstrated by other methods of diagnosis.

Irregularities of the heart often disturb the diagnostic acumen of the physician and the electrocardiogram can be considered the final authority on all of these irregularities. It is very important to know the exact nature of any cardiac irregularity because the prognosis and treatment will depend largely on the type of irregularity present. It is of vital importance to differentiate between auricular fibrillation and partial auriculoventricular block with dropped beats, since the proper treatment of the two conditions is radically different. Digitalis is of great benefit to a patient with auricular fibrillation whereas it is contraindicated in cases of uncomplicated heart block. Clinical recognition of the milder forms of heart block is difficult and often impossible without the use of graphic methods. Graphic evidence of myocardial involvement may be in the form of certain alterations of the P wave, the characteristic change in the QRS complex or T wave.

The electrocardiographic evidence of myocardial disease must always be correlated with clinical observations as there are only a few instances in which graphic evidence is of significance without such reference; viz., recent coronary occlusion, in overdigitalization, and bundle branch block. The degree of abnormality of the electrocardiograph does not parallel the amount of cardiac damage, because the heart, like the brain, has many silent areas in which extensive involvement may lead to little or no change, while on the other hand a slight localized lesion in one of the bundle branches gives rise to extensive alterations in the graphic record.

Premature contractions or extrasystoles exhibit wide ranges in their frequency and hence render diagnosis at times difficult. When by their frequency they produce a picture similar to that of auricular fibrillation, the latter condition being serious and demanding limitation of physical exertions and mental activities in order to postpone death, whereas the diagnosis of extrasystoles would render an entirely different outlook, the importance of heart tracings can readily be seen. Premature contractions may be either auricular or ventricular. To know that a patient has extrasystoles is not enough because treatment is not the same for all forms. It has recently been shown that digitalis in full doses will wipe out auricular extrasystoles. Digitalis slows the heart and exaggerates the presence of ventricular extrasystoles. Hence, other measures such as eradication of focal infections, lessening the amount of tobacco used, and removal of the patient from any source of severe mental strain, must be instituted in order to free the patient from this irregularity.

In 1920, Pardee reported an electrocardiographic sign of coronary artery obstruction which has become the most characteristic and popularly accepted criterion for the graphic diagnosis. This picture includes a V-shaped inversion of the T wave; low amplitude of the ventricular complexes; a high take-off and a peculiar arching of the T wave. Other significant abnormalities frequently found include: a widening of the Q.R.S. complex associated with notching or splintering, an increase in the auriculoventricular conduction, and the development of the prominent Q wave in Lead 3 as described by Brown, Levine and Pardee. These observations have, to a large extent, been confirmed by Smith, Willius, Wearn, Levine, Wiggers, Barnes and Whitten, and particularly by Parkinson and Bedford. Barnes has pointed out that T wave negativity could result not only from coronary sclerosis, but from various injuries to the myocardium, the result of strain predominantly of either the right or the left ventricle; also that such strain need not be manifested in the myocardium except as hypertrophy or dilatation of one or the other ventricles. It was further established by these same workers that strain predominantly of the left ventricle was associated with inversion of the T waves in Lead 1 or Leads 1 and 2; strain predominantly of the right ventricle with inversion of the T waves in the combined Leads 2 and 3. More recently Barnes and Mann have established by animal experiments that the left and right ventricles probably act as separate units, as far as the effect on the RST segment of the electrocardiograph is concerned.

Parkinson and Bedford, in a study of one hundred cases of coronary thrombosis, found deviations of the RT and ST segments occurring early in the disease, and also found a negative T wave present during the later course of the illness. The RT and ST elevations and depressions were best seen in Leads 1 and 3 and were opposite in direction. The T wave in some cases became evident before the RT segment returned to the iso-electric line, in which case the direction of the T wave was always opposite to that of the RT segment. They further found that within two or three weeks after the onset of infarction the RT segment had usually returned to the iso-electric level and the T waves were fully developed in all leads.

The electrocardiographic phenomena produced by interruption of certain parts of the coronary circulation is striking. Certain factors seem to be

important in the production of these electrocardiographic changes. Wood, Wolferth, Smith and other observers have noted that more striking changes followed the ligation of vessels on the posterior surface of the heart; viz., the circumflex branch of the left and posterior descending coronary arteries. As a rule, clamping the right or the anterior descending branch of the left coronary artery produced little or no change; the changes vary greatly also as to the size of the area of myocardium which is supplied by the affected coronary vessel. Wood and Wolferth showed that coronary occlusion in healthy fresh hearts did not produce electrocardiographic changes as readily as it did in damaged hearts. This is true also in man as shown by the case of Bousfield. It is known both experimentally and clinically that the heart may recover and the electrocardiogram return to its previous status after the myocardium has suffered from ischemia of sufficient magnitude and duration to produce electrocardiographic changes. According to Wood and Wolferth, the severity of the pain in angina pectoris did not seem to determine the presence of specific electrocardiographic changes.

Angina pectoris is a cardiac abnormality which has the personal interest of many physicians. This condition, whether due to aortitis as described by Albutt, or coronary endarteritis, as was the teaching up until a few years ago, is always an alarming one. Each consecutive attack of pain may be the worst and may terminate fatally. The physician is ever on the alert for ways and means to render an intelligent prognosis and give proper treatment. How much will the electrocardiograph reveal concerning this condition? In the diagnosis of angina pectoris, some tracings will exhibit a prominent Q wave and a peculiar T, called the coronary T wave. There are other cases of true angina pectoris that present no abnormality on the tracing. Still, no diagnosis is complete without a tracing. In the prognosis of angina pectoris aid can be expected from the electrocardiograph. Inverted T waves, signs of intraventricular and auriculoventricular block, and low voltage, are all signs that increase the gravity of prognosis. Patients with true angina pectoris whose attacks are brought on by exertion and do not come on while at rest or during sleep, whose hearts clinically do not show much enlargement or other abnormalities, and whose electrocardiograms are practically normal may, with rest and more rest, expect many years of useful existence. Unfortunately, this may be said only for the average case. There are patients who die in the first attack. There are those whose hearts are apparently normal, with normal tracings, but who die just as readily as do those with abnormal tracings. However, most of the deaths due to angina pectoris occur in those whose tracings showed some abnormality.

Coronary thrombosis is different. It is more serious than, and is often the end picture of, angina pectoris. Patients who have precordial pain, unrelieved by nitrites, and but little aided by morphine, whose blood pressure, whether previously high or not, drops, and whose tracing shows some abnormality noted above, may expect a sudden fatal outcome at any moment.

The usual electrocardiographic changes found in coronary heart disease and angina pectoris may occur at the time of the paroxysm or shortly after the attack has subsided. These changes such as QRS, T wave, and so forth, may vary from day to day and it is important, therefore, not to depend on one tracing. Wood and Wolferth, using the electrocardiograph in a study of 30 cases of angina pectoris at the time of the anginal attack, concluded that 15 cases disclosed no electrocardiographic changes and that 15 showed definite temporary electrocardiographic changes.

CONCLUSION

This paper should not be considered as an extensive review of cardiology. It has as its main topic the practical value of electrocardiography. Many details and technical descriptions have been omitted. Clinical diagnosis has not been mentioned except to emphasize its importance in routine cardiac examinations. The electrocardiograph has its place in cardiology and it is a very important one. To expect a proper diagnosis by a clinician without the use of the machine is impossible. And in a similar manner, it is futile to expect from the cardiologist a proper heart survey unless he is permited to give the patient a clinical examination.

The electrocardiogram presents a very definite advance in the proper evaluation of heart disease and its treatment. Many cases of coronary disease may have a paucity of clinical findings and not lend a true significance to the seriousness of the heart ailment. In many such cases the electrocardiogram will reveal significant changes and thus enable the clinician to carry out prompt and proper measures to safeguard the patient. The electrocardiograph does not supplant the clinical examination and history, but rather acts as an aid in the diagnosis of the various heart disturbances.

Tuberculosis, once the major cause of death, has by the institution of educational measures together with the use of the refined and newer methods of diagnosis, been displaced as the leading cause of death. This can also be accomplished in diseases of the heart by similar methods. The fulfillment of this goal demands that the physician make him-

self familiar with all the newer methods of diagnosis and treatment just as he learned to use the laboratory and x-ray in the eradication of tuberculosis.

The origin and character of the arrhythmias can be determined by means of electrocardiographic tracings. Other abnormalities present in regular hearts can be noted. Signs may be present that will help in the differentiation of endocardial lesions. By means of the abnormalities noted, the prognosis can be intelligently given. On the correct diagnosis, the treatment depends. The routine use of the electrocardiograph in periodic health examinations and in preoperative cases over fifty years of age will reveal unsuspected heart lesions which by proper management may give to the patient many years of useful and pleasant life.

820 Equitable Building.

Discussion

Dr. Walter L. Bierring, Des Moines: These interesting and comprehensive papers on angina pectoris and clinical electrocardiography reflect the progressive spirit of the membership of this society. These would not have been possible a few decades ago, or in the recent memory of most of us.

In the writings of Osler, Allbutts and MacKenzie, angina pectoris was described as a distinct and separate disease. With the classic description of coronary thrombosis by Herrick, and further important contributions of American internists, angina pectoris has come to be regarded as its most expressive subjective phenomenon. Angina pectoris and coronary artery disease may occur in manifold relationships. While a purely neurogenic form of angina pectoris is recognized, a large majority of the cases of angina pectoris present the signs or changes incidental to coronary occlusion, both clinically and anatomically.

Ischemia due to arterial occlusion causes pain in the muscles of the extremities, and a similar change in the myocardium offers the most plausible explanation of the anginoid syndrome. Partial and gradual coronary narrowing is characterized by the angina of effort, while a sudden complete occlusion produces the angina of rest, often more severe and prolonged than the paroxysmal type incidental to the strain of physical effort.

As stated so clearly by Dr. Collins, the electrocardiograms have proved of particular diagnostic value in acute and chronic coronary occlusion. It is frequently possible to determine the area involved and the extent of myocardial damage. By means of repeated examination the course of subsequent changes is indicated as well as the probable outcome.

Both acute and chronic cases of angina pectoris and coronary occlusion permit of ready clinical diagnosis, and are usually based on definite pathologic and anatomic changes in the myocardium. The earliest possible recognition of these conditions is of far reaching importance. It is reasonable to assume that the basic anatomic changes have been forming over a long period of time, possibly for years. It is hoped to encompass this developmental period into a clinical syndrome. The most expressive term for this syndrome is that of myocardosis, namely, disease of the myocardium, first proposed by Riesman in 1926. It is to be distinguished from chronic moycarditis, which term implies a background of inflammatory phenomena. Myocardosis is distinctly a degenerative change and is intimately connected with the aging process, the result of the wear and tear of life. The signs are largely subjective and the art of the examiner is taxed to elicit the essential complaints from the patient.

One of the early signs of myocardial weakness is fatigue, occurring after ordinary efforts or habits incidental to the daily order of life. The mimicry of gastric symptoms or gastric masquerades as termed by Riesman, are further expressions of myocardial weakness. These somewhat vague phenomena usher in the more characteristic triad, termed by Kauffman the three steps to heart failure—breathlessness, palpitation, and substernal discomfort, the latter symptom most frequently causing the patient to seek medical advice. Certain vasomotor disturbances as vertigo syncope, and occasionally convulsions, may be a part of the syndrome. These often occur with simple postural changes or movements connected with the occupation of the patient.

A number of physical and objective signs have an important relation. An enlargement of the heart, changes in blood pressure with exercise tests, spirometer estimations of vital capacity, and venous changes deserve special consideration. The electrocardiogram may occasionally present abnormal changes before other distinctive signs of myocardial disease are demonstrable.

All the phenomena mentioned, subjective as well as objective, are indicative of a lowered myocardial reserve, and taken concurrently, form a clinical picture which permits of ready recognition. It offers an alluring prospect in the study of the various phases and stages of coronary disease now beyond our ken. A proper appreciation of the myocardosis syndrome creates a new field in preventive medicine worthy of our best efforts.

INTRA-OCULAR FOREIGN BODY: AN UNUSUAL CASE*

John E. Rock, M.D., F.A.C.S., Davenport

Because of the force required by intra-ocular foreign bodies in penetrating the globe and the damage done by this penetration, the patient is often left with an unsatisfactory eye condition even after the foreign material has been successfully removed. From my observations I would say that this is the condition in more than 50 per cent of the cases. So often after an early and suc-

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cessful removal of such a foreign body, vitreous and lens changes occur, the happy prospect of the first few days soon turns into a coarse hyalitis, intra-ocular exudation and a varying amount of loss of vision.

It is with this fact in mind that I wish to present a case which illustrates the opposite course, and which in a field of so many poor results may serve as a source of satisfaction to us. I am making no attempt to discuss intra-ocular foreign bodies, their care and so forth, and only wish to say that searching through literature and case records I found little which showed absorption of intra-ocular exudates and organization, especially when the latter have existed for some time and have materially reduced the vision.

CASE REPORT

Mr. O. V. M., thirty-four years of age, a welder by occupation, was first seen January 8, 1930. He gave the following history: While cutting hubs out of gears he struck a hub with his hammer and felt something go into his right eye. This happened at 2:00 p. m. on the day before we (Dr. G. F. Harkness and the writer) saw him. Immediately following the accident he could see spots dancing before his eye and in a few moments he fainted. He was seen by a physician who did some work on the eye, kept cold cloths on it, and used some brown medicine. There was very little pain and the patient slept well. Our examination about twenty-four hours later was as follows:

Right pupil dilated; eye somewhat congested, and no definite avenue of entrance for a possible intra-ocular foreign body. RV. 20/50 O. D. $-1.00 - .50 \times 180 = 20/25$. LV. 20/20 O. S. No correction. An ophthalmoscopic examination showed the media somewhat blurred, and an exudate or foreign body in the lower part of the eye and behind the lens; x-ray examination: Sweet localizer confirmed the suspicion that this was a foreign body.

At six o'clock on the same day a sclerotomy was performed, below and about six millimeters from the limbus and a large piece of steel removed through the wound with a giant magnet. The conjunctiva was closed with three sutures; atropine instilled and the eye surgically dressed. Cocaine was used as an anaesthetic.

The patient was kept in the hospital two days and on the fifth day the vision in the eye was 20/33. A coarse hyalitis was noted, along with what seemed to be some early lenticular changes from above. Results of subsequent examinations were: Jan. 27, 1930, hyalitis worse Rv. 20/40; Jan. 28, 1930, hyalitis Rv. 20/70; Jan. 29, 1930, Rv. at first 2/200 then 20/200.

An ophthalmoscopic examination at this time showed a general haze which seemed too far forward for a detachment, and had some of the appearance of an intra-ocular hemorrhage. The patient was returned to the hospital where he remained until February 12, 1930, with vision improved to 20/40. From this time the vision became rapidly worse until February 21, 1930, it was down to 20/200, and we could barely get a retinal reflex although light perception was good in all fields. The eye was whitening out and he was allowed to work at easy tasks. At this time it seemed that an intra-ocular organization was taking place.

February 26, 1930, vision in the right eye, light perception only, projection still good, little or no retinal reflex.

March 1, 1930, using bright light, vision in the right eye was limited to motion.

March 5, 1930, some organized material in vitreous.

March 8, 1930, poor localization.

March 25, 1930, light perception only in lower field and ophthalmoscopic examination showed a grayish exudation filling the pupillary area and obstructing the view.

April 5, 1930, no light perception, later very poor light perception, and only in nasal field.

A diagnosis was made of suspected detachment degeneration and organization following foreign body. The left eye was still normal, vision 20/20, and accommodation good.

Here the patient was discharged as having completely lost the vision of his right eye, and was so paid by the insurance company.

On June 17, 1932, the man returned complaining of headaches and wished to be examined for glasses. He also said that he could see some from his right eye. Examination findings were:

Rv. 20/25 Lv. 20/20 −

O.D. $+.75 - .50 \times 90 = 20/20 -$

O.S. $-.50 + .75 \times 90 = 20/20$ OU $+.50$.

Ophthalmoscopic examination findings were:

O.D. Good clear view of fundus and no hyalitis present.

O.S. normal.

On direct questioning he said his vision began to improve in the injured eye eight or ten months after he was discharged, and was soon apparently as good as the left except for a dimness of vision to the right side.

Under atropine he was refracted with

O.D. $+.50 + 1.00 \times 180 = 20/20+$

O. S. $+.75 + .75 \times 90 = 20/20+$

Ophthalmoscopic examination shows a long retinal scar to the temporal side of the disc which

barely misses the macula and extends about two-thirds the length of the vertical dimension of the eye. There is no hyalitis.

CONCLUSION

This remarkable recovery was accidently discovered although it did not occur to the patient to report the improvement; he came in to seek relief from his headaches.

On more or less cross examination he told us the vision started to improve eight or ten months after his discharge. He first noticed that he could see lights; about four months later he could dimly see objects and from that time there was a steady improvement except for the loss of the peripheral vision on the nasal side. This loss is accounted for by the retinal scar, which was confirmed by a perimetric chart.

We considered this patient a very fortunate man and really were more excited about it than he was.

Discussion

Dr. George A. May, Des Moines: We are indebted to Dr. Rock for bringing to our attention this unusually interesting case history. In brief here is a patient with a piece of steel in the vitreous chamber which entered without apparent damage to the outer chamber of the eye. This foreign body is successfully removed with a giant magnet through the sclerotomy wound. The vision was only slightly subnormal following the operation. Two weeks later a failing vision with cloudiness of the vitreous chamber but no retinal changes are noticed. By the end of six weeks vision is down to 20/200, and by the end of two months we have only light perception and poor localization. In another month there seems to be poor light perception and what little there is occurs in the nasal field. The doctor decides that there must be detachment of retina, and the insurance company pays for complete loss of an eye. Approximately two years later it is discovered that this man has had complete return of vision, which is 20/20 with correction. Ophthalmoscopic examination shows a line of scar tissue on the temporal side of the macula, and the vitreous clear.

In an attempt to determine what has taken place in such an eye, one has to consider the following possibilities:

1. The extreme loss of vision from vitreous opacities, as from low grade infections or other inflammatory changes.
2. Hemorrhages.
3. Hysteria.
4. Malingering.
5. Detachment of the retina.
6. Rupture of the choroid.

The first of these could account for the extreme loss in vision but one would scarcely have such complete clearing of vision if infection were present in the vitreous, although the poor localization of light directed to the nasal field could readily be accounted for by obstruction to the passage of light through the vitreous. His ophthalmoscopic examination eliminates the possibility of extreme vitreous hemorrhages, and the history does not suggest the possibility of hysteria or malingering when we have the clouded vitreous, etc. In regard to retinal detachment, the relatively short single scar he describes hardly coincides with detachment of sufficient extent to account for so marked a loss in vision. The scar could be entirely accounted for by a rupture of the choroid, and the history he gives of the course of events with relatively good vision immediately following injury, the increase in vitreous opacities and extreme loss of vision with the eventual return to normal, corresponds to the course of events as seen in choroidal rupture as described by Wurdmann with case history citations from Knapp, Saemisch, Vossius and others. The loss of vision in these cases is explained as being due to connective tissue formation in the macula, vitreous opacities, and interference with nourishment of the retina. Vision is recovered completely when there is complete healing or drawing together of choroidal rupture with improvement of nourishment to retina.

In conclusion I wish to state that it has been our custom to remove magnetic foreign bodies from the vitreous chamber through the scleral route, in most instances, but we have never seen detachment of the retina follow this operation. When loss of vision has occurred, it has been almost invariably due to infection which foreign bodies carry into the eye.

I think Doctor Rock should be congratulated on the ultimate good visual result he has obtained, in view of the high percentage of such cases which are lost.

Dr. Gordon F. Harkness, Davenport: Anyone accustomed to doing industrial surgery can readily appreciate the very embarrassing position in which Dr. Rock and myself were placed as a result of the final outcome of this case. It teaches a lesson in reporting permanent total loss of vision. After so reporting to the insurance company, one naturally experienced a great deal of chagrin when the patient returned in two years with normal vision. It is extremely hard to satisfactorily explain such final results to an insurance company. The symptoms as presented justified a diagnosis of a probable detachment, even though the after results practically eliminated such a condition. The pathology present after the injury, together with lack of light perception justified our prognosis. It was just one of those cases that performed contrary to all the rules. It was my first experience of the kind and the first time in my years of practice that we had to make apologies to an insurance company, for our prognosis.

Dr. William W. Pearson, Des Moines: This is really a very important subject. Having something to do with the commissioner's office here in Des Moines, I have occasion to review and re-examine a number of cases for the insurance companies or to satisfy the commissioner.

First of all I would suggest that we be on the alert in any type of eye injury. I recall two or three cases

in which the physician in attendance suspected no foreign body within the eye, but when I saw the patient a week or so after the accident the picture showed a minute metallic particle within the vitreous chamber or in some portion of the eye. This is very important. Sometimes these points of entrance are in the sclera and the conjunctival wound is healed. We must not overlook the fact that some of these minute particles may enter through the lens and the capsule wound may close. I have had a few such cases under observation for a time in which a cataract did not develop.

I think the doctor's course in the removal of the foreign body is to be commended: that is, when it is in the vitreous chamber to remove it through the scleral wound after localization with the Sweet localizer. It is always advisable to slit the conjunctiva before the incision is made in the sclera, so that when the conjunctiva is released it covers the scleral wound. Furthermore, the incision should be made in a manner to parallel the vessels within the globe and have as little resulting hemorrhage as possible.

There is one thing in connection with the case here that I did not note. The intra-ocular tension was not taken from time to time. This affords considerable information relative to the progress of any intra-ocular type of trouble, as to whether tension is lessening or increasing. If we will consider many of these cases of intense retinitis and get the vision from time to time, it will seldom, if ever, be seen to decrease to the point that was noted in the case under discussion, but the vision does go down to a very marked degree in certain types of retinitis. I can conceive of an intense process within the posterior chamber of the eye that would render the function of the retina practically nil, but few of these recover.

The commissioner and the insurance companies say not to be too hasty in the final conclusion in cases of this type. It has been my custom in certain cases to recommend a delay of a year or even longer before the final settlement. It would seem in this case, from the absence of all evidence of inflammatory trouble and the appearance of nothing other than an eye free from pain, that practically stationary process had been reached, but the evidence teaches us to proceed slowly, and, in case of doubt, to ask for re-examination at intervals. We should follow the case through until we are satisfied that we have the final result. In an injured eye of this type we never know what is the last stage of the process. An eye of this kind sometimes sets up a sympathetic inflammation even after we have had an apparent return to normal.

The doctor did not name the size of the foreign body that entered the eye.

Dr. Rock: I do not remember the exact measurements, but it was about two or three millimeters.

Dr. Pearson: This is a most interesting case and is the type that awakens us to the importance of the proper care of the case at the start, and warns us not to be too hasty in our conclusions as to when the end result is reached.

Dr. Henry B. Young, Burlington: It seems to me that this case indicates that a possible edema of the retina had taken place and was slowly absorbed.

I have recently had under observation an old patient of mine who came in a year and a half ago, without any history of trauma, but a dimness of vision in his right eye. Examination showed a fine rent in the anterior capsule. I could get no evidence of any penetrating wound. He absolutely denied that he had had any injury. Fortunately, the rent was not extensive enough to cause rapid infiltration of the lens with the aqueous, but there was sufficient leakage to produce a permanent and complete cataract with a very fine, dense scar on the anterior capsule. If he had had an insurance claim, I think it would have been difficult for me to explain the situation, because there was no positive evidence of injury and no entrance wound. I think we have to watch these things very carefully before having the insurance company pay claims of this nature.

Dr. Rock, (closing): I want to thank Dr. May for such a nice discussion. He enumerated the possibilities of diagnosis, which I purposely omitted since I wanted to make a bare case report with no suggestion of diagnoses.

There was, as I recall it, little or no iritis or inflammation in the eye at the time. I think we have no record of the tension.

The reason the case was turned in to the insurance company as a final loss of vision was the great amount of exudation and at one time the complete loss of light perception. You notice I said on one date there was no light perception, and a few days later there was very little. We decided that the man had lost his eye.

In writing to various men about the country I became a little enthusiastic and asked them for opinions on eyes that had complete intra-ocular organization. That is quite a mouthful, as I soon realized after receiving a few letters that were a little sharp telling me that when there is complete intra-ocular organization, i. e., retinal detachment and degeneration of the vitreous and lens, there never is a return of vision. I must admit I was probably a little over-enthusiastic in calling it a complete intra-ocular organization.

RETINOBLASTOMA*

FRANK L. SECOY, M.D., Sioux City

According to Jackson[1], the term "retinoblastoma," is a relatively new addition to medical nomenclature having been chosen by Verhoeff and approved by a committee of the American Ophthalmological Society in 1923.

This new name is the result of much discussion on the part of our deeper thinkers and is an effort on the part of these men to have the name be descriptive of the disease. This term is open to

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some objections, chief among which is its double language root mentioned by Verhoeff. It is derived from the Latin "retina" and the Greek "blastos" meaning a growth of germ cells. Thus it will be seen that retinoblastoma is truly descriptive when compared with the older term "glioma." This will be noticed later when the microscope is turned on this interesting tumor.

The history of this tumor dates back to 1809, when it was first described by Wardrop. He was attempting to separate the "fungus hematodes" described by Hey (1736 to 1819) from cancer and in doing so he described cases of tumor of the eye occurring in children. (Ewing)[2]. In 1819 Beer noticed the peculiar reflex and named it "amaurotic cat's eye." Robin in 1854 gave the first accurate histologic description. (Bartley)[3]. In 1864 Virchow thought he found glia tissue present and gave this tumor the name "glioma retinae" which has remained until recently. Even now articles, usually under the heading "Glioma," are appearing in literature other than our own.

During the eighteenth century however such men as Knapp (1828), De Gama Pinto (1866), Hirschberg (1869), and Wintersteiner (1897) wrote extensive and scientific works concerning this tumor. In 1895 E. Treacher Collins[4] said, "Sixty years prior to this time very little was known of the natural history of glioma. Consequently it was termed Fungus haematoides, encephaloid tumor, or medullary degeneration. But that since many cases had been reported, patients were observed earlier and followed more thoroughly; the disease was now understood better and had been divided into three stages." The tumor has had many other names such as, Neuro-Epithelioma (Wintersteiner), Gliosarcoma (Virchow), Glio-angiosarcoma and tubular gliosarcoma (De Gama Pinto). This tumor was also held to be a small celled sarcoma principally by Ziegler, Pindfleisch, Delafield and Leber.

SYMPTOMS

The symptoms of retinoblastoma present themselves, naturally, within the various stages of its development. The course of the tumor has been described by various authors as being divided into different numbers of stages; for instance, Collins[4] considers the disease in three stages, De Schweinitz-Randall[5] considers it in four stages, while still another author, divides the course into ten stages. I shall consider the tumor under three stages, since we are most interested with those symptoms developing in the first two stages because it is within these divisions that the correct diagnosis means life or death to the patient.

First Stage. Intra-ocular growth up to the beginning of inflammation. The most important complaint during this stage is the peculiar reflex from the eye, which Beer called "amaurotic cat's eye." Another symptom is blindness, in children old enough to notice it, or deviation usually inward of the affected eye. As a rule, the tension is not increased but the pupil is dilated.

Second Stage or Glaucomatous Stage. The pain in this stage is usually very severe. Corneal infiltration occurs and other evidences of severe inflammation are present. The tension is increased. Delirium and fever often accompany the symptoms in this stage. The cornea is rapidly expanded by growth, finally ending with rupture of the globe.

Third Stage. Extra-ocular growth and metastasis. The symptoms in the final stage are great exhaustion and very bad odor. Meningeal signs may develop before death finally supervenes.

DIFFERENTIAL DIAGNOSIS

Under this heading, I have seen the following lesions mentioned by a number of different authors:

1. Metastatic ophthalmia.
2. Exudative or suppurative lesions of vitreous (pseudoglioma).
3. Choroidal tuberculosis.
4. Fetal remains of the tunica vasculosa lentis with persistent hyaloid artery.
5. Simple detachment of the retina. (This is comparatively rare in childhood, and is almost always accompanied with a history of an injury.)
6. Leukosarcoma of the choroid.
7. Acute suppurative hyalitis.
8. Circinate retinitis.
9. Cysticercus of the choroid or retina.
10. Coats's disease (exudative retinitis).
11. Hippel's disease. (Angiomatosis of the retina.)

Much comment has been made upon the method of spread of this tumor. However, it is fairly well established that it spreads backward along the optic nerve, thence to the brain; also to the bony walls of the orbit, and the bones of the face and skull. Dr. Arnold Knapp[6] says, "It is curious that metastases occur about the eye and decrease with the distance away from it." Many authors have stated that the bilateral tumor originates in each eye independently of the other one, but Dr. A. B. Reese says, "The bilateral nature of glioma is sometimes due to its spread from the subdural space around the optic nerve of one eye to the opposite eye." Metastases have been reported in most of the vital organs, but more frequently in the liver and in the skeletal bones.

Retinoblastoma is essentially a disease of infancy and early childhood and the statistics as to

its incidence vary in different localities. Bartley[3] states that glioma comprises about .04 per cent of all eye diseases and that it is bilateral in 25 per cent of the cases. Other statistics place the incidence all the way from 60 to 94 per cent occurring before the age of four years. Krauss and Goldberg[7] state "at Wills Eye Hospital there has been observed only one case of glioma in over 5,000 patients of all ages" and that "at St. Christopher's Hospital for Children, one case in 3,232 eye patients." Thompson[8] reports thirteen cases from 24,500 plus patients in his own private practice. Sisson[9] collected statistics from twenty-two of the great clinics of the world and out of 498,057 eye patients, gathered 203 gliomas or .04 of one per cent. Out of 71 cases, 65 developed bilateral gliomas. Collins in 1895 reported 72 cases of the tumor, out of which 23 had bilateral growths either at the same time or at a later date. The longest interval between growth on the first eye and one on the second eye, was found in a case reported by Magby[10]. He removed the second eye nearly eighteen years after the first one, and microscopic sections confirmed the presence of glioma. While this tumor is expected to develop and does develop during the first few years of life in the vast majority of cases, yet Verhoeff[11] records the history of a patient who was forty-eight years of age. An eye was removed from this patient and the tumor was found to consist almost exclusively of various sized rosettes identical in appearance with those of a retinoblastoma.

Collins[4], De Schweinitz[5] and others speak of the following two types of this tumor:

1. Glioma exophytum, that one starting from the outer surface of the retina and forming its mass between the retina and choroid with the retinal vessels coursing over the surface. This type is said to occur three times more frequently than the following one.

2. Glioma endophytum, that one starting from the inner surface of the retina, growing directly into the vitreous, obscuring the retinal vessels by its mass.

HISTOLOGY

The histology of thus tumor has been described by Grinker[12] most aptly. He says that "glioma must be divided into the following: Those arising from the primitive retinal and ciliary body epithelium, medullo-epitheliomas; those from the hypothetic bipotential indifferent retinoblast, the retinoblastomas, sometimes called retinocystomas, and those from the primitive spongioblasts or neuro-epithelium, the so-called neuro-epitheliomas.

The retinoblastomas consist of small, round and polygonal, often carrot-shaped cells containing scanty cytoplasm and, as a rule, closely packed together. The nuclei are large and dark staining and have a definite chromatin network. Fine tail-like processes from one end of the more elongated cells are found in rare instances. Intercellular substances cannot be seen except for a fine reticular stroma. Mitotic figures are most abundant in this tumor. The cells usually have a characteristic radial arrangement about the blood vessels, but must be strictly differentiated from the rosettes of the neuro-epithelial tumor which radiates around clear spaces. The rosettes around the blood vessels then are pseudorosettes and are characteristic only of the tumors arising from the indifferent cells. Degenerative changes, such as necrosis, fatty degeneration, calcification and hemorrhages are frequently found. Grinker says, "a better understanding of retinal gliomas can be obtained by comparing the cells found in retinal tumors with stages in the histogenesis of normal retinal elements."

CAUSES

A. Cell Inclusions or Rests.

The causes back of this tumor are just as complicated and unknown as are those of any cancer in the body. In addition to the earlier theories prior to the eighteenth century, J. Mueller[2], in 1838, made what was perhaps the first statement of the cell inclusion theory when he said "cancer was developed from germ cells which lay scattered between the tissue elements." This thought was taken up by Cohnheim[2] (1877) and expressed as a theory that "tumors arise not from normal cells but mainly from isolated and generally embryonal cells and tissue rests." Collins[4] stated that, "a microscopic specimen of a fetal retina at three months with layers undifferentiated is such that if shown to a pathologist it would be pronounced by him as glioma." Meyer[14] said, "from all the uncertainties that still surround the problem, cancer, there stands out at least one observation which is a generally established fact; that the cancer cell was at one time a normal tissue cell, a cell of that particular tissue in which the cancer arises."

B. Heredity.

This is also a tremendous force in the causation of this tumor as evidenced by the following brief case reports: Berrisford[1] made the following report on the Grover family: Thomas Grover had an eye removed in 1859. (Presumably glioma.) In 1898 his son, three years of age, had an eye removed and died of paralysis at the age of fifteen. Thomas Grover's daughter had eight children. Of these the first, second, third and eighth had bilateral gliomas and died between three and four years of age. De Gouvea[1] reported a man who had an

eye removed for this disease. He was the father of seven children two of whom had bilateral gliomas. Gasper[1] enucleated the right eye of a baby whose mother's left eye had been enucleated for the same condition nineteen years previously. Griffith[1] reported two families in which the mothers had been successfully operated upon for glioma. Four out of seven children of the one family were attacked by the disease, and three out of four children of the other family developed it. The fourth was stillborn. Letchworth[13] reported a man whose right eye was removed at the age of two years and three months. He became the father of four children who all developed the tumor. Letchworth said, "from the patient's and parents' point of view, early enucleation is best but why upset nature's method of ridding the race of hereditary taints." Meyer[14] stated that, "the feature underlying the disease, cancer, may be inherited or acquired."

C. Chemistry.

In Germany during the seventeenth century, the lymph theory[2] of the origin of cancer was advanced. Chemical conceptions were foremost and cancer was attributed usually to an excess of acid which should be treated by alkali. (Helmont, Ettmueller.) This may sound rather fantastic and since it originated in the seventeenth century we may be inclined to dismiss the pronouncement as having no foundation. Permit me to quote a few lines from Meyer's book on cancer. "It can be said that individuals reacting with pH (hydrogen ion concentration) values below 7.33 are always pathological on the side of alkalinity, i.e., are in a state of clinical alkalosis." "It would seem there can hardly be doubt any longer, that alkalosis of the blood predisposes to cancer." Reding[14] said, "cancer is always associated with alkalinity." It may therefore be assumed that the seventeenth century chemical conceptions were not so far-fetched after all.

TREATMENT

A. Enucleation.

The earlier writers had little to offer in the way of treatment except early enucleation with section of the optic nerve as far posteriorly as possible. Syme[15] in 1835 said, "In adding another instance of unsuccessful extirpation of the eye for medullary degeneration to the many which are already upon the record, I cannot refrain from expressing my conviction that it would be better for the interests of humanity and for the credit of surgery if this operation were entirely abandoned." It has since been proved that enucleation before extension into the optic nerve and before perforation of the sclera, has been successful in eradicating the disease, even when it became necessary to enucleate both eyes.

B. Radium and X-Ray.

Many recent papers have been devoted exclusively to the treatment of this tumor by means of radium and x-ray. The results have apparently been brilliant. Cases must be carefully selected and treated thoroughly without delay; they must be observed and followed long and carefully to give the patient vision without endangering life.

Schoenberg[16] reported a case of bilateral glioma cured in the non-enucleated eye with vision of 15/100 corrected by Sph. plus 11.00D after the removal of a later developing cataract. The removed eye sections proved the presence of glioma. He claimed this was the first recorded case which had been treated by radium and observed over a period of ten years. Treatment began with 36 millicuries of emanations filtered through lead and applied to the right temple. Three treatments were given, the last one consisting of 209 millicuries filtered through two mm. of lead and one-half mm. of silver, over the right temple for fourteen and one-half hours. Benedict[17] reported the treatment of a non-enucleated eye of an identical twin with radium several times each year from 1922 to 1928. The patient lived but she developed a complicated cataract. The enucleated eye proved to have a retinoblastoma. Chase[18] reported that on July 12, 1920, he had treated the non-enucleated eye of a bilateral glioma with thirty mgs. of radium, and that this treatment had apparently arrested the growth. An answer to my recent inquiry stated that radium treatment was not efficient; the eye was removed but the child died of intracranial metastasis.

Moore[19] reported five cases of glioma which had been treated with radon seeds varying in strength from 1 millicurie to 5.3 millicuries. In some instances the seeds were implanted in the growths directly through the sclera and allowed to remain ten days. In other instances the seeds were clustered in bunches of five around an area outside the sclera. No sloughing of the sclera was noted. These seeds were especially prepared and filtered through one-half mm. of platinum. It was possible in two of these cases to watch, for a considerable length of time, the disappearance of the growths and the subsequent change which took place in them. The only case I noted which was treated by x-ray alone is mentioned by Schoenberg[16]. He states that a private communication from Verhoeff tells of a patient whose worse eye had glioma verified microscopically and whose vision remained 20/30 plus for seven years after x-ray treatment. The tumor mass is still visible and practically unchanged in appearance.

C. No Treatment.

It is a matter of record that many untreated gliomas, during the course of a few years, undergo spontaneous regression. Legrange[16] collected from the literature 22 cases showing partial or complete atrophy of the eyeball. Purtcher[16] published a report of two cases of spontaneous regression in one family, with the preservation of useful vision in each case. Glioma had claimed three of this same family by death during several preceding generations. Meller[16] reported two cases in 1915 and 1922, respectively. One patient, a child, four and one-half years of age, had one eye enucleated, and microscopically diagnosed as glioma. In the eye of the other patient, several yellow nodules were seen with tortuous vessels running over them. The nodules grew. The patient disappeared and returned four years later, at which time the nodules were found to be flat, chalky white atrophic areas. The eye retained vision. Siegrist[16] presented to the Heidelberg Congress of Ophthalmology the enucleated eye of a three and one-half year old child which had been microscopically diagnosed glioma. Above the macula in the child's other eye was a round grayish zone, five disc diameters wide and with a whitish and nodular central area. There was also a small mass at the periphery. Vision was apparently intact in this eye. One year later the central area of the patch was white and the nodules gone; vision was 0. 6. Wintersteiner[16] mentioned temporary arrest or regression followed by atrophy of the eyeball. Collins and Mayou[20] said, "In rare cases an eye affected with glioma, instead of becoming glaucomatous and enlarged, shrinks and atrophies. In the majority of such cases both eyes are affected but only one becomes atrophied." They also stated that "The cause of the cessation cannot be definitely determined. It may be blockage of blood supply, or due to toxins of some intercurrent inflammation." I am wondering whether it might not be due to some sudden and unexplained shifting of the individual's pH balance from the alkalosis side to the acidosis side where Meyer[14] and Reding state that cancer never grows.

CASE REPORT

On April 14, 1930, a white female baby, aged seven months, was brought to my office by the parents for an examination of the right eye. The mother stated that about three months previous she noticed that the pupil of the right eye was much larger than the pupil of the left eye. She also noticed a peculiar "flash or glint" from the right eye. These unusual features puzzled her but she did not become greatly alarmed until during the past two weeks when she noticed that the eyeball was also growing larger than the left one. The personal history of the child was unilluminating. She was the eleventh child and birth had been normal in every way. She developed and grew without any troubles until the age of four months when the above noted symptoms appeared.

The family history was also negative. Neither the father nor mother knew of anyone in the preceding generation who had been afflicted by a cancer or tumor.

The right eyelid was not swollen. The right cornea seemed larger than the left cornea; in fact the right eyeball seemed larger than the left eyeball. No circumcorneal injection was present and there were no other evidences of inflammation. The iris dilated widely and was immobile; the cornea and lens were clear and transparent. A marked greenish white reflex was noticed from the right eye, with oblique illumination. A mass almost touching the posterior surface of the lens and apparently filling the entire vitreous chamber was easily seen. A few vessels were visible on its surface. A diagnosis of glioma retinae was made and the eyeball enucleated the following morning with as much nerve as I could get. The fundus of the left eye seemed clear. The right globe after enucleation appeared intact and a macroscopic examination showed the nerve to be normal.

The child was seen in the office on April 18th, the wound was dressed and the parents told to return in two or three days for a new dressing. The socket was healing as usual. The child was not brought back, however, and no concern was felt until the following month. On May 16th I received the following preliminary report from the Army Medical Museum where the eyeball had been sent for pathologic study. "A retinoblastoma fills two-thirds of the globe and has apparently penetrated the sclera posteriorly." I immediately wrote to the parents about the report and requested that they bring the baby in for re-examination. I received no reply to this letter, although



I was informed indirectly that the baby was all right, and that they had purchased an artificial eye for her. Another report dated May 23, 1930, said "Section of the nerve shows the retinoblastoma extending along the central vessels." I again wrote the parents stressing the importance of bringing the child in for another examination and telling them of the further report I had just received; again no reply. The final report came June 23, 1930, "Detached retina the site



Fig. 1. Anterior portion of retina showing extension of tumor under retina. a. Tumor mass under retina. b. Retina. c. Choroid.



Fig. 3. High power view showing type of cell.

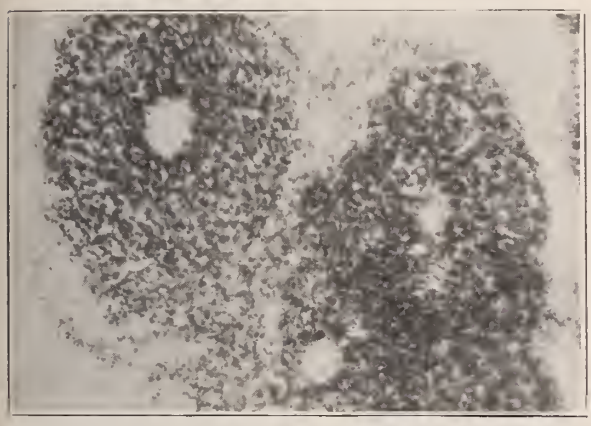


Fig. 2. Low power view showing rosette formation.

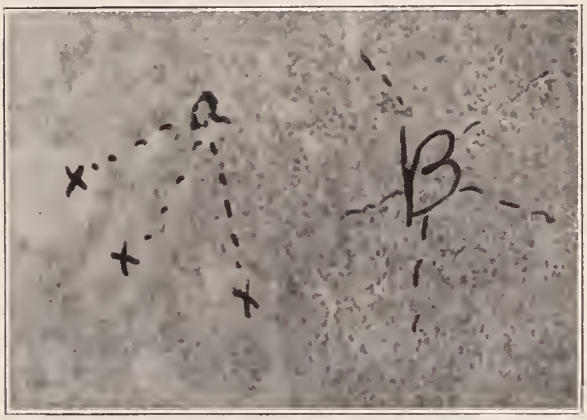


Fig. 4. Portion of optic nerve showing involvement. a. Central vessels of nerve. b. Tumor cells along central vessels.

of a rather rapidly growing retinoblastoma containing calcium. Lens pushed forward, iris atrophic. The tumor has extended along the optic nerve well outside the disc." No report concerning the child was received until, during the writing of this paper, I visited her home for information. I must admit that I was very much relieved to find her alive and well, and I submit to you her picture snapped that day as proof of her present condition.

Here are some slides of this case, which Dr. A. C. Starry, pathologist of Sioux City, has kindly consented to review for me. His report is as follows: "Examination of section of eye reveals a glioma of the retina. This tumor originated from the posterior segment of the retina, probably from the internal granular layer. The tumor occupies most of the vitreous space but has not penetrated the sclera. It is composed of small round cells appearing as small dark-staining compact nuclei exhibiting a scanty cytoplasm. Some of the cells assume a rather low cuboidal or cylindrical form, and are arranged in small alveoli or rosettes resembling neuro-epithelial rosettes. In some areas these cells are arranged in rows or indistinct arches, while in other areas, they are in large compact masses containing small canals lined with a thin membrane and containing a hyalin exudate. Some areas show necrosis. The tumor is not very vascular. A study of the optic nerve shows involvement of the central portion. These tumors are sometimes called neuro-epithelioma retinae."

This case is remarkable because of the reported involvement of the nerve and the penetration of the sclera posteriorly, either one of which conditions should have been followed by recurrences and death. The young lady is now one month past the three-year limit which is spoken of by Collins and Mayou[20], Lawford[20], Collins[4], De Schweinitz[21], and others, as granting immunity from further recurrences.

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Discussion

Dr. Leland H. Prewitt, Ottumwa: I have very little to add to the paper. Most of mine is slight discussion and also slides, but there is one point Dr. Secoy mentioned that I would like to emphasize;

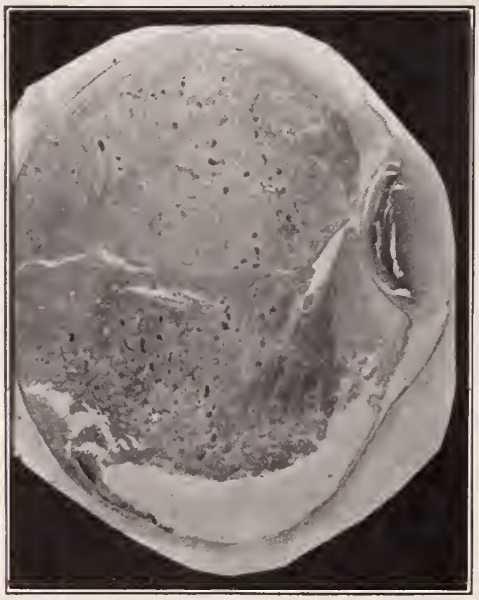


Fig. 1.

that it might be better for the human race and for the doctor's reputation if no surgical attempt were used on these patients.

Dr. A. B. Reese examined about 119 cases of retinoblastoma. These included Dr. Verhoeff's and Dr. Fuchs' as well as those of his own private cases in New York. Of the 119 cases, 63 proved to be posterior to the lamina cribrosa, and of the latter number, 51 had already extended into the optic nerve. It makes it difficult for a doctor to guarantee absolute cure to a patient after trying to get the patient's consent to remove the eye. As you know, from recent newspaper accounts of a case of this nature, there is a legal aspect of this question which is worth considering.



Fig. 2.



Fig. 3.

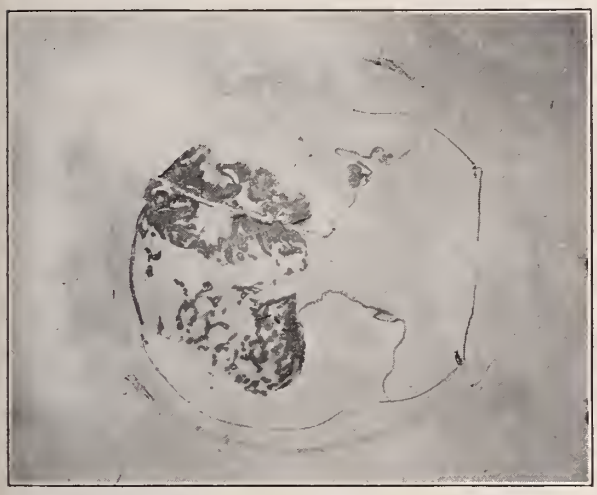
At the time of operation, as Dr. Secoy mentioned, I feel that it is important to remove as much of the optic nerve as possible. Two to three millimeters is the normal length obtained whereas ten to twelve

millimeters should be obtained, as many sections show that the extension of the gliomatous tissue has not extended much beyond two to three millimeters in the optic nerve.

In regard to the differential diagnosis, most of us feel that it is a disease of youth, but Verhoeff's case shows that it does extend into later life.

Dr. John H. Matheson, Iowa City: Collins states that the tendency of retinal blastoma is to spread along the lymph sheaths of the blood vessels and after invading the choroid to extend out into the orbit. According to Morax, extension through the sclera may take place through the sheaths of the ciliary nerves.

Collins believes that metastasis may take place in the eye itself from cells of the primary growth which become detached and carried to the anterior chamber, vitreous chamber and subretinal space. Morax stated, in 1921, that the usual point of origin is in the



In this the rosettes show up very nicely, and this is a type of the retinoblastoma between the retina and the choroid.

ganglion cell and internal nuclear layers. This theory varies from those of the later writers, one of whom has said that only rarely do retinal blastomas arise from the ganglion cell layer, but most commonly originate in the inner and outer nuclear layers.

The forty-eight year old patient, reported by Verhoeff, was presented as being unusual, aside from the advanced age, because of the condition apparently originating in the region of the ora serrata and the marked extent to which the uvea was involved. The great majority of these tumors originate in the posterior quadrant of the eye. Knapp states that metastases in retinal blastoma are rare, but they tend to metastasize to bone in contrast to choroidal sarcoma. Wintersteiner found 43 cases of retinal blastoma with metastasis to the brain, 40 to the skull and seven to the liver. Fuchs found 30 cases of choroidal sarcoma with metastasis to the liver and three to the bone. Knapp, in 1924, reported the autopsy findings of a case of retinal blastoma with metastasis to the brain, skull, liver, false pelvis and subperiosteally to all the ribs excepting the lower two.

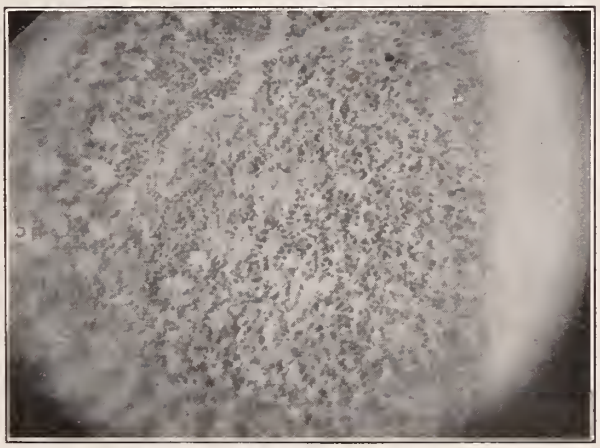
In regard to diagnosis some note has been made to the possibility of differentiating glioma from pseudoglioma by finding evidence of iridocyclitis by the slit-



This is another child three years of age that refused operation and later died from local metastasis.

lamp. Blaauw, however, states that uveitis often indicates the presence of a tumor.

As to prognosis it has been said that if a patient lives three years after enucleation without evidence of recurrence that a return of symptoms is improbable. However, the other eye must be carefully watched. Fuchs draws attention to the fact that

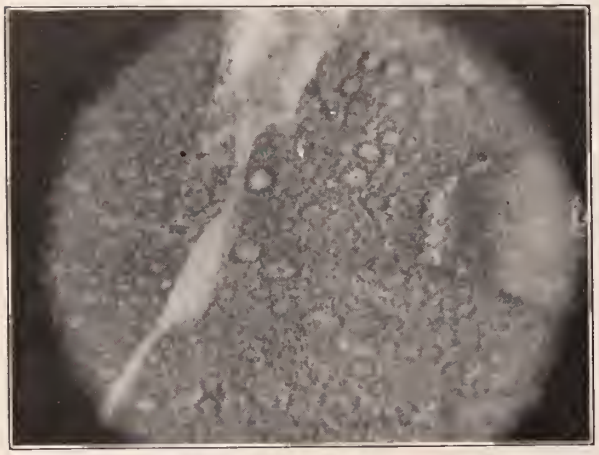


This shows the largest one of all, and two sections of the optic nerve I will show you next. The rosettes show up very nicely there, and among them are also the so-called pseudo-rosettes that have the blood vessels in the center.

tumor formation in the shape of little white prominent foci in the retina may not become malignant, may spontaneously disappear, or may not progress.

The accepted treatment seems to be definitely enucleation followed by x-ray and radium radiation. If the sclera has been perforated, exenteration of the orbit should be followed by intensive radiation. Grier believes that due to the frequency of return after enucleation, exenteration of the orbit followed by deep

radium and x-ray radiation offers the best chance. Four slides are presented; the first two, of the eyes of a child two years of age with bilateral retinal blastoma. The first shows a large tumor of the right eyeball which fills the posterior one-third of the vitreous and extends into and completely fills the physiologic cup. The second slide is the left eye with a small mass lying in the region of the macula which



This shows the optic nerve of the last patient and shows the characteristic extension of the retinoblastoma into the nerve sheath. Characteristically, this type of tumor goes down the sheath and does not destroy or invade other tissue around it, especially the nerve sheaths themselves.

seems to be arising from the inner nuclear layer and possibly the external nuclear layer. The third slide shows its histology. The fourth slide is a section of retinal blastoma from a child only two months old, shown to represent the many Wintersteiner's rosettes with necrotic areas. Morax has stated that these rosettes may represent ganglion cells modified under the influence of gliomatous proliferation. This is somewhat borne out by the fact that they do not appear in the metastatic growths.

Dr. William C. Finnoff, Denver, Colorado: I think one point bears emphasizing and that is the terminology used in speaking of this tumor. I am glad to hear Dr. Secoy use the term "retinoblastoma," because it is a much better classification than glioma. These are not gliomas in any sense of the word. A glioma arises from glia tissue. While there might be a proliferation of the glia tissue in a retinoblastoma, it is not a true glioma, and the term "retinoblastoma" should be substituted for the term that has formerly been used.

As to the treatment of the second eye, when both eyes are involved, I think if one makes a diagnosis of retinoblastoma in one eye, that eye should be enucleated providing the other eye is free. However, if it is bilateral, one is justified in enucleating the eye that is involved excessively, or if the involvement is slight in both eyes and the patient can be kept under observation, one is justified in using ray therapy, either x-ray or radium. If both eyes are involved and one is extensively affected, which is usually the case, the one involved most extensively should be enucleated. The eye with the lesser involvement should be treated with either x-ray or radium as long as it can be kept under observation.

After the development of a secondary cataract the chances of recurrence cannot be prognosticated because the fundus cannot be seen. In most of these cases a secondary cataract will develop because of the amount of radium or x-ray that is required to destroy the neoplasm. The advisability of early cataract extraction is, of course, questionable in cases of this type. These cases require a great deal of judgment in their management. There are cases on record, as the author has stated, in which a cure has apparently taken place. Axenfeld, for instance, had a case in which there was an extensive retinoblastoma in one eye, and in the second eye there were two small nodules. This case was treated with radium and observed for over twelve years without the development of a secondary cataract. As long as the cataract does not develop and the fundus can be seen one is justified in carrying on such a treatment.

THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCE

BONE AND JOINT LESIONS

DONALD C. CONZETT, M.D., Dubuque

Four cases dealing with minor complaints about the joints are presented this morning. They are important from a diagnostic standpoint, since lack of treatment would mean subsequent permanent disability.

Case 1. The patient, a boy three years of age, was first seen in the office, May 18. The mother had noticed that for the past six months the boy had a slight limp, aggravated after play. On inquiry he would admit that he had some pain in the left thigh. The boy was an only child, delivery had been normal, and he had been breast-fed. He had been unusually well with no history of illness. There was no history of tuberculosis in the family. Examination revealed a robust youngster with height and weight adequate for his age; temperature was 98.2 degrees; the nose, throat, chest and abdomen were entirely negative for pathology. The left leg measured one-quarter of an inch less in length than the right leg and there was definite spasm on flexion of the left thigh on the abdomen. Abduction was decreased about 10 degrees. A slight crepitus, with elicited pain, occurred when the thigh was rotated. No increased fullness or fluctuation could be ascertained about the joint. Though his temperature had never been taken the mother had noticed no flushing and his sleep was never interrupted by twitchings or night-cries. A provisional diagnosis of Perthes' disease was made with a possibility of tuberculosis of the joint. The roentgenologic report was as follows: "Films of both hip joints and the pelvis show a normal epi-

physis of the head of the femur on the right. The left is definitely flattened and segmented. The acetabulum itself is perfectly smooth and uninvolved. There is no haziness to the joint. The picture is characteristic of Perthes' disease of the left hip."

The following day, under anesthesia, a unilateral plaster body casing was applied with the affected member in slight extension and abduction.

This disease which has a plethora of names was first described independently by Legg and by Perthes



Fig. 1.

in 1910. The most descriptive and therefore more properly used name is osteochondritis deformans coxae juvenilis but it is commonly called Legg-Perthes' disease. Other names include quiet hip disease, pseudocoxalgia and coxa plana. The etiology is unknown although various suggestions have appeared. Phemister believes the condition due to a low-grade infection. Legg thinks that trauma with resultant circulatory disturbances is the inciting factor. Calve attributes the disease to an underlying rachitis, while Delitata infers a congenital origin. The pathology exists under, rather than in, the cartilage and this destruction or softening process produces a "mushroom" or "capping" appearance of the head caused by the constant pressure of the head into the unyielding acetabulum during walking. The process occurs much more frequently in males and is usually manifest in early adolescence. The age of the patient under discussion is much lower than the usual case of Perthes' disease. Diagnosis is made on the symptoms and signs of slight limp, spasm, limited abduction and shortening. Tuberculosis must be excluded through history, night-cries, fever, joint tenderness and debility. Strain, "growing-pains," or trauma have all too frequently been diagnosed when an adequate examination would have revealed the true condition. Elimination of movement in the joint is the basis of treatment toward the end of resting the joint and thus promoting healing which takes from three months to a year. The x-ray check-up is the best means of determining the status of the disease, but the ultimate prognosis is good.

Case 2. The patient, a boy thirteen years of age, was first seen in the office, May 20. He complained of a persistent swelling of the left knee, some tenderness to pressure and a weakness of the entire leg. On questioning the boy admitted that some discomfort had been noted for the past six months, but that following a fall on May 13, there had been persistent pain. Previous illnesses had been limited to the ordinary childhood diseases. He had not been injured. There was no history of rheumatic fever and no family history of tuberculosis or cancer.

Examination revealed a well developed lad of thirteen with no demonstrable physical defect other than that about the left knee. There was some infrapatellar swelling but it was not of a fluctuating character. A definite point of tenderness existed over the tibial tuberosity and this bony prominence was definitely larger than that of the right leg. The tenderness was increased when the leg was completely extended, and full flexion was likewise limited by spasms. There was no evidence of injury to the semilunar cartilages either from the history or the examination. The knee jerk was present bilaterally but painful when produced on the affected leg. Circulation about the leg was uniform and there was no sensation of heat about the joint. A diagnosis of Osgood-Schlatters disease was made and an x-ray ordered. The roentgenologic report was: "Anterior-posterior films of both knee joints show a definite Osgood-Schlatters disease of the left tibial tubercle. The right joint is also somewhat ragged, irregular, and segmented but not nearly as marked as in the left joint." A circular plaster casing was applied with the leg extended, and a felt pressure pad incorporated over the tuberosity. The lad was allowed to continue with his school work.

This entity was first described in 1903 by Osgood. The following year Schlatter presented a series of cases. The process is essentially an inflammation of the tongue-like prolongation of the upper-tibial epiphysis. In childhood and early adolescence this process is not united to the shaft and repeated irritation or injury by falls or forceful quadriceps contraction may be the instigating factor. This disease is found predominantly in males in the age group of ten to fifteen years. The symptoms are slight limp, tenderness on pressure, and pain on complete extension. Final diagnosis is made on the x-ray findings. To avoid an error in diagnosis, both knees must be x-rayed and the appearance of the normal adoles-

cent condition kept in mind. A good prognosis may be expected with immobilization in extension for from six to twelve weeks.



Fig. 2.

Case 3. A drug clerk, twenty-one years of age, was first seen May 15. He complained of pain and swelling in the left knee of five weeks duration. His family physician had been painting the part with iodine, but had obtained no relief for the patient. There had been no history of actual injury, although the pain was first noticed when the man was carrying a stove downstairs. He had had no rheumatic attacks nor any other illnesses. Venereal infection was denied. A sister is at present in a sanatorium with tuberculosis. The pain in the knee had been sufficient to cause loss of sleep and appetite, with a consequent loss in weight.

Examination showed a pale, underweight male, with considerable acne about his face. The nose and throat were clean and there was no enlargement of the cervical glands. Careful examination of the chest revealed no abnormality in the lung fields. The heart tones were regular in rate and rhythm. A scaphoid abdomen disclosed neither mass nor tenderness.

The left knee was uniformly swollen and reddened, the latter probably due to iodine irritation. Patellar movement was unrestricted and gave no sensation of floating on fluid. The greatest tenderness existed over the internal semilunar cartilage, but the pain was not accentuated by rotation. There was no history of locking. Extension was painless but was limited to 170 degrees and flexion was likewise 10 degrees short of normal. To make a diagnosis we had to decide whether the lesion was one of bone, joint, or soft parts. Osteochondritis dissecans, bone cyst, Brodie's abscess, and sarcoma were considered as possible bone lesions. Lack of injury and absence of grating or locking ruled out osteochondritis dissecans. Sarcoma seemed improbable because of lack of bone tenderness and the fact that the swelling was not increasing. Tuberculosis was possible from the family history but the "doughy" feeling of a tuberculous knee was absent and the swelling was too slight. Chronic arthritis was a possibility. Injury or a cyst of the internal meniscus was likewise considered but again there was insufficient history of injury. Chronic bursitis and chronic sprain were ruled out because of the persistence of the swelling. An x-ray was ordered and the report was: "Films of the left knee joint show a cystic area just medial to the midline in the upper end of the tibia. This has a slightly sclerotic border and suggests an osteochondritis except for the fact that it is on the tibia rather than the femur. The possibility of a Brodie's abscess must be borne in mind. This is not



Fig. 3.

seen in the lateral view. The joint space is clear and normal and the cartilaginous surfaces smooth."

The knee was placed in a circular plaster casing in extension and the patient asked to return in six weeks. At that time the casing was removed, the local tenderness and swelling had disappeared, and the boy had gained weight.

The x-ray department states: "The bony defect in the anterior surface of the tibia, described previously, has practically filled in at this time. The nature of this process is not apparent." It is our opinion that this was a low-grade Brodie's abscess which absorbed and was replaced by bone when

treated by rest, immobilization and constitutional support.

Case 4. A painter, fifty-two years of age, was first seen March 29. Six months previously he had bumped his right knee on a box. There had been no external wound but some swelling and stiffness which persisted for several weeks. During the past two months he had experienced weakness in the knee and occasional "catchings." He could feel something crawling in the knee joint and it grated as he walked. The patient was a thin but otherwise normal appearing man of the given age. General examination was negative. The right knee appeared slightly swollen and there was some atrophy of the anterior thigh muscles. Extension of the leg on the thigh was com-



Fig. 4.

plete, as was flexion. However, following attempted rotation which induced spasm, the leg refused to extend fully, locking at 150 degrees. Repeated flexion and extension released the blocking obstacle. Further manipulation disclosed a rounded, freely movable foreign body within the joint space. This could apparently so accommodate itself to the joint space as to produce intermittent locking and free joint motion. An x-ray was ordered and the report was: "Anterior, posterior and lateral plates of the right knee show a calcified, loose joint body in the anterior lateral position of the knee joint. This has apparently separated off the loose articular surface of the femur. It is difficult to give the exact location of the point of separation because of regeneration. The appearance is very typical of osteochrondritis dissecans."

The patient was operated on April 1. While on the table and before the anesthetic was given, a film was taken with the portable x-ray to localize the foreign body. A vertical incision was made curving laterally around the patella and the joint space opened. A smooth, rounded piece of bone, the size of a large pecan immediately popped into view. This was removed, the joint capsule quickly closed, and the wound sutured without drainage. The leg was immobilized in a posterior splint with massive dressings over the wound. There was a negligible amount of postoperative swelling, and the wound healed promptly. The man made an uneventful recovery with full motion re-established. Konig, in 1890, gave the name of osteochondritis dissecans to this entity. Injury is the most frequent etiologic factor and the fragment may be dislodged until some time after the injury. Tags of hypertrophic synovia may likewise coalesce to form foreign bodies. The diagnosis is made on the history of pain, intermittent locking and the x-ray findings. The treatment is surgical removal.

The above cases are examples of bone and joint lesions which probably occur more frequently than is usually supposed. When correctly diagnosed their treatment is relatively simple, but if neglected, more or less incapacity may result. A correct diagnosis depends upon a good history, a careful physical examination and especially upon the x-ray findings.

A MICROSCOPIC ORAL CAVITY AND BONE DIAGNOSTIC DEMONSTRATION

Dr. Joseph Colt Bloodgood announces his annual diagnostic and lantern slide demonstration of malignant conditions, particularly of the oral cavity and bone, to be held in Washington, D. C., at the Mayflower Hotel, September 17 to 24, 1933, inclusive.

Dr. Bloodgood is particularly anxious to attract a large number of pathologists, radiologists, surgeons, dentists, and physicians interested in the diagnosis and treatment of cancer in all phases, and the local conditions that precede cancer. All of the demonstrations will be diagnostic. Lantern slides will be shown first, and every one will be given an opportunity to record their diagnosis before the final diagnosis is given.

The clinic has been transferred from Baltimore, Maryland, to Washington, D. C., since the Mayflower Hotel has offered particularly attractive rates, both regarding room service and dining room service for physicians attending this meeting. It is further pointed out in the announcement that artificially conditioned rooms will be provided by the hotel without cost for all meetings.

To secure the excellent facilities for this demonstration, a guarantee of 100 registrants is required. It is important for this reason that those contemplating attendance at the demonstration promptly notify the Mayflower Hotel, Connecticut Avenue and L Street, Washington, D. C., or Dr. Joseph Colt Bloodgood, 3301 North Charles Street, Baltimore, Maryland.

STATE DEPARTMENT OF HEALTH

Walter L. Bierring
Commissioner.

INTRODUCTORY

The purpose of a change in this page is to present each month the various activities of the State Department of Health which will be of interest to the readers of the Journal. These will be representative of the entire Department but proper credit will always be given for individual effort. A closer integration of the Department with the State Medical Society is essential in any successful campaign of public health education and the prevention of disease. It shall be the purpose of this Department to correlate and direct its activities at all times in the interest of organized medicine.

WALTER L. BIERRING, M.D.

CARRIERS ASSOCIATED WITH TYPHOID FEVER CASES

The incidence of typhoid fever has decreased steadily during the past decades. An Iowa physician who has practiced for over forty years, recently mentioned that during the early years of his practice most of his time during the season of prevalence of the disease, was given to the care of typhoid patients. In contrast with this, a younger physician had seen but one case of typhoid fever in the past fifteen years. In 1900, the death rate for the United States registration area was 36 per 100,000. This was reduced in 1930 to 4.5 per 100,000.

The prevention of water borne diseases through modern filtration plants and chlorination has been largely instrumental in lowering the morbidity and mortality rates from typhoid fever. Control of water supplies, although of paramount importance, cannot be expected to entirely eliminate this infection. So-called "residual typhoid" remains, the existence of which depends in part upon means of dissemination other than polluted water.

A chief factor in the continued spread of typhoid fever is the bacillus carrier. Through the use of a typhoid case record form issued by the State Department of Health, carriers are from time to time being demonstrated as the source of infection in typhoid fever cases. A few instances may be noted. In May, 1933, a case of typhoid fever was reported in a man twenty-eight years of age. A fourteen-year-old girl in the same home was sick with the same disease five years ago. A woman in this household who had typhoid fever forty-two years ago, and who is now 77 years of age proved to be a carrier. In June of this year, a farm wife was found to be a typhoid carrier, following the report of typhoid fever in a hired hand on this farm. At least three cases, occurring on the same farm from 1922 to 1924 were traceable to the same source. Within the past weeks, two more typhoid carriers have been found. One is a middle aged woman in a farm home where three patients now have the disease; the other, a woman seventy years of age who had an attack of the disease when eight years old, is now known to be a carrier. The latter is apparently the source of infection of three current cases of typhoid fever and of twelve additional cases which have been reported from the immediate environment of her home during the past number of years.

Credit for the discovery of typhoid carriers is due in large part to the cooperation of attending physicians and local health officers who arrange for the procuring and forwarding to the laboratory, of feces and urine specimens from those suspected of harboring a carrier state. The painstaking efforts of laboratory workers, in isolating Bacillus Typhosus from the specimens concerned, are of course directly instrumental in providing the evidence which pronounces who are carriers.

The State Department of Health now forwards feces and urine outfits to physicians, whenever information given on the returned case record form indicates that a carrier is suspected. The containers bear postage for the convenience of physicians and to obviate added expense. This special arrangement applies only to containers used in relation to typhoid patients and suspected typhoid carriers. Rules and regulations of the Department require that "clinical cases of typhoid fever shall not be released until free from infection, and shall not be considered free from infection until two laboratory examinations of specimens of both feces and urine collected not less than twenty-four hours apart, show the absence of the infecting organisms." The mucous membrane of the gallbladder has long been known as a favorite haunt for typhoid bacilli. It is conservative to say that two per cent of all typhoid cases persist as chronic bacillus carriers. At least one carrier resulted from an epidemic which occurred in Iowa in 1932. One of the carriers recently discovered in connection with new cases was a patient in an epidemic ten years ago.

Further reduction in the incidence of typhoid fever is dependent in large measure upon the detection and supervision of typhoid carriers.

EPIDEMIC ENCEPHALITIS

A news letter issued August 26 by the United States Public Health Service states that from August 7 to 24, inclusive, 213 cases of epidemic encephalitis were reported from the metropolitan area of St. Louis. Twenty-eight deaths have resulted, making the case fatality rate 13 per cent. Fewer epidemics of this disease have occurred in the United States than in other countries, the condition during past years being more sporadic in character. The news letter draws attention to the clinical picture which "is that of a general febrile disturbance, often with gastro-intestinal symptoms such as vomiting, constipation or diarrhea; evidences of cerebral involvement, an apathetic or immobile facial expression, usually somnolence, stupor, coma or delirium, usually a moderately stiff neck, with headache, which is often the first and most pronounced symptom, and other pains, as of the abdomen or legs; tremor and catatonic semi-rigidity are common in the more severe cases." The onset is as a rule quite sudden; over a period of from one to three days. In former years, increased incidence has been confined to the winter months, which is not true of the present epidemic. In view of the seasonal incidence, screening of homes against mosquitoes, flies and other insects is recommended. Water is not regarded as playing a part in the spread of this infection. A twenty-one day period of isolation as in poliomyelitis, should be instituted in the effort to limit spread of infection.

It is urged that such cases as may occur in Iowa be promptly reported to the State Department of Health. Death records show 24 fatalities in Iowa, from encephalitis lethargica for 1932. The central health office received notification of only seven cases for the same year. A death due to epidemic encephalitis occurred at Council Bluffs during the third week of August. This case was promptly reported. During 1933 ten cases have thus far been reported in Iowa.

THE MULTIPLE PRESSURE METHOD OF VACCINATION

Vaccination against smallpox by the multiple pressure method is rapidly replacing some of the older procedures. The pressure method causes the least amount of discomfort, requires no dressing, produces a mild reaction and at the same time establishes an immunity of high grade. These advantages are very worth while, especially in view of the fact that even now there are people who object to vaccination because of sore arms. Smallpox vaccine as now prepared, is highly potent if kept at low temperature as it should be. The amount of virus introduced intradermally by the multiple pressure method is extremely small. This cannot be said of certain former methods, particularly that of scarification, in which the denuded area and the drying interval allow the introduction of many, many times the necessary amount of yaccine, giving rise to a severe and occasionally alarming type of reaction. It is essential that a method of vaccination which causes but slight discomfort and at the same time confers a high degree of immunity be more universally practiced.

An illustrated folder entitled "Vaccination by the Multiple Pressure System," as recommended by the United States Public Health Service, will be forwarded on request.

ADMINISTRATIVE STAFF

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Frederick J. Swift, Ph.G., M.D., Deputy Commissioner
Division of Communicable Diseases and Epidemiology, Carl F. Jordan, M.D., C.P.H., Director
Division of Sanitary Engineering, A. H. Wieters, M.S., Director
Division of State Hygienic Laboratories, Iowa City, M. E. Barnes, M.D., Dr.P.H., Director
Division Child Health and Health Education, J. H. Kinnaman, M.D., Director
Division of Licensure and Registration, Henry W. Grefe, Director
Division of Law Enforcement, Herman B. Carlson, Attorney, Director.
Executive Clerk, Lynn Clemens.

THE NEW DEPUTY COMMISSIONER

Dr. Frederick J. Swift entered upon his duties as Deputy Commissioner on August 1st, after completing a ten weeks special course in public health administration. The course was arranged under the personal supervision of Professor W. G. Smillie, M.D., Dr. Gaylord W. Anderson of the Harvard University School of Public Health, Dr. George H. Bigelow, Commissioner, Massachusetts State Department of Health, and Dr. Stanley H. Osborn, Commissioner, Board of Health of Connecticut. In addition to administrative duties Dr. Swift will have supervision of state venereal control, and county public health units.

STATE FAIR EXHIBIT

Through the efforts of the commissioner, the State Department of Health obtained quarters for its annual exhibit at the Iowa State Fair in the educational building. Because of this advantageous location hundreds of Iowans had the opportunity for the first time, of studying the features of the department's exhibit. Fluorine in water and mottled enamel defect of the teeth attracted considerable attention. Through the cooperation of C. T. Ostrem, D.D.S., of Ankeny, the department was able to present the dental aspects of this condition to the public. A group of boys and girls whose teeth show this defect were present at all times. Communities whose water supplies contain fluorides in two parts per million or more and towns in which children with the defect have been observed, were indicated

in colors on an attractively lighted map of Iowa. Mr. D. A. Greenwood, Graduate Assistant, Departments of Physiological and Physical Chemistry, Iowa State College, presented experimental proof to the effect that mottled enamel can be produced in rats and dogs by feeding fluorine compounds.

Through the cooperation of Dr. M. E. Barnes, Director of the State Hygienic Laboratories, at Iowa City, several interesting bacteriologic demonstrations were presented. Other feature subjects included: stream pollution and sewage disposal, Rocky Mountain spotted fever, low cost layette, care of the equipment needed in preparing milk feedings, causes of autocides, and block (three dimensional) method of showing death rates. Amateur movies taken by Mr. R. B. McAllister, Assistant Sanitary Engineer of the department pictured certain activities of the department that could not be presented well by other means. The exhibits of the Iowa Tuberculosis Association and the Iowa State Medical Library completed this educational project.

J. H. KINNAMAN, M.D.
Superintendent of Exhibit.

PREVALENCE OF DISEASE

	July '33	June '33	July '32	Most Cases Reported from
Diphtheria	21	22	46	Polk
Scarlet Fever	42	49	34	Polk, Pottawattamie
Typhoid Fever	5	9	16	Jasper
Smallpox	11	45	21	Jasper, Linn
Measles	29	194	17	Page, Pottawattamie
Whooping Cough	192	89	46	Boone, Johnson
Cerebrospinal Meningitis	4	2	1	Wright
Chickenpox	29	80	24	Woodbury
Mumps	46	128	23	Johnson, Black Hawk
Poliomyelitis	1	3	4	Clinton
Tuberculosis	47	32	56	(For State)
Rocky Mountain Spotted Fever	2	2	0	Allamakee, Clarke
Undulant Fever	23	24	9	Pottawattamie
Syphilis	176	215	186	(For State)
Gonorrhea	228	224	265	(For State)

A WARNING

The State Health Department has received the following letter, warning Iowa physicians to be ready for this morphine addict:

Dear Doctor:

There is a man who is going around the state and calls up a doctor in a town and says, "This is Major J. H. Morgan of the Veteran's Administration, Service Office, Soldier's Hospital, Marshalltown, Iowa, and I have a man here who is having pulmonary hemorrhages and would like to have you give him some morphine so that I can get him to the hospital. He has his own syringe and you can either give it or let him do it himself, and send me a bill at once to Marshalltown and you will get five dollars for your service. This man's number is 1279935, so be sure to put that on the bill when you send it in. He is taking three grains three times daily. Please give him that much now and let him have that much to take with him so that we can get on through with him and we will be able to make it all right."

This man comes into the office in a few minutes and asks for something to spit in as he is having hemorrhages and he spits up a mouthful of blood and soon another small one. He has his papers with him showing that he has been in the hospital in California.

I thought you would like to have this information so as to warn the doctors over the state that this imposter is making his morphine off them through his fake telephone calls.

(Signed) Dr. ————, Creston, Iowa.

Information Wanted

Walter L. Bierring
Commissioner

The Secretary of the United States Department of Labor has called a conference of persons interested in child health to be held in Washington, D. C., Friday, October 6, 1933. The purpose of this conference is to obtain complete information as to the extent of malnutrition among children.

The State Department of Health can present accurate information only if the physicians of Iowa supply answers to the following questions:

1. On the basis of your experience during 1933, has the number of malnourished children increased, decreased or shown no change over 1932? Please express the change in percentage.

2. What criteria were used as a basis for the answer to question No. 1? Please submit comparative data if available.

3. Have the evidences of malnutrition been common to children of all age groups or have they been observed especially among infants or children of the preschool or school age groups?

4. To what factors do you attribute this increase of malnutrition?

Too little food
Lack of essential food elements
Decrease in breast-feeding
Physical defects, such as carious teeth, etc.
Improperly balanced diet
Lowered consumption of milk
Foci of infection
Nervous instability.

5. Is the economic status of the family a dominant factor in determining whether or not malnutrition results among children?

6. What evidences other than malnutrition have you observed which indicate that child health may be seriously affected by the continued economic stress?

7. What corrective measures would you suggest?

Address all replies to the Iowa State Department of Health, Des Moines, Iowa.

The JOURNAL of the Iowa State Medical Society
ISSUED MONTHLY

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FALLING WITH THE FALL

Some time ago a world-famed aerialist was interviewed regarding the hardest feat which he had to learn in his particular profession. Without hesitation he replied "to fall with the fall." Puzzled by this answer his interviewer requested further detail, to which he is said to have replied that in his particular work falls were inevitable, and frequently occurred from considerable height. If the aerialist schooled himself to fall with muscles relaxed and without attempting to break or ward off the fall by rigidly extended arms or legs, little harm usually resulted from these accidents. One is reminded of the frequent falls sustained by persons in a deep state of intoxication, or somnambulism. Certainly in these cases the individual falls with his fall.

The writer recently interviewed a prominent business man who presented himself because of an impairment which had been recently noted during the course of an insurance examination. An elevated blood pressure was determined, but it was only after several visits that the writer was able to satisfy himself concerning the cause of this hypertension, since this man had successfully passed repeated health examinations during the past decade. A fragment here and a fragment there soon pieced together a story of his fight against the threatened crash of his business resulting from the recent economic stress. He worked against the unseen hand of depressed financial conditions during his waking hours at his place of business, and according to his own story reached home at night in an exhausted condition which made him quarrelsome with his family, disagreeable with his neighbors, and of no comfort to himself. His sleep had been disturbed, and when he awoke at odd hours during the night he attempted to work out the knotty problems which had presented themselves during the day. Little can be done for this man by drug therapy. He was advised to fall with the fall, to survive or perish by a reasonable effort and not to handicap these efforts by a mental strain and worry which did not increase his efficiency, but on the contrary, acted to undermine his health and destroy his business judgment.

A professional friend, enjoying an enviable practice among a very substantial clientele, has allowed the poor collections of the past year to destroy his confidence not only in his fellow man but, which is far more important, in himself. He has developed a case of nerves which surely reduces his efficiency and jeopardizes his health.

These pictures are not unique in my experience or yours. One wonders, however, if many of these individuals suffering from functional or even from organic disease may be intelligently treated without a full knowledge or appreciation of the background permitting the condition. Should we not be on the alert, particularly at this time, to recognize in those individuals without clear-cut or characteristic disease syndromes, those bizarre and indefinite symptoms traceable to the present economic stress. The intractable headache of the office employee may not be due to eye-strain or migraine; it may be a defense reaction against an economic situation which appears intolerable. Hysteria and psychoneurosis may be satisfying diagnoses, but insofar as the patient is concerned, have little to do with a satisfactory management of his case.

Whatever the condition may be called, in many instances if these underlying and determining causes can be elicited and presented to the patient in an analytic fashion, his malady may be ameliorated. Teach such a patient to fall with his fall. If he has tumbled down the economic ladder from a position of affluence to one of mediocrity or even one of want, we should point out to him that with health and the changing times, his former state of affluence may again be attained; but unless he can develop such a philosophy his broken fortune must be accompanied by broken health, and broken health permits no escapes.

Let us be mindful of the fact that the physician possesses no immunity from this malady. His reactions may be just as amazing and just as puzzling as those of his patients. He too has had his hardships and problems, and his nervous system is susceptible to the poisoning effects of worry. Suppose collections five years ago were 90 per cent, and today are only 50 per cent. Hysteria will not correct the condition. Learn to fall with the fall. Take the bitter with the sweet and the good with the bad. If this attitude can be devel-

oped and maintained, we may escape that form of Americanitis recognized as nerves, more popularly spoken of as "the jitters." Falling with the fall is not a natural inherent impulse. It must be cultivated. It must be studied, and will come only to those who patiently and consistently cultivate the quality.

EPIDEMIC ENCEPHALITIS

The present epidemic of encephalitis lethargica or epidemic encephalitis raging in and around St. Louis, Missouri, stated to be the worst epidemic in the history of the disease, has attracted widespread attention, and has caused the United States Public Health Department to concentrate some of its most efficient workers in this territory for the observation of this epidemic.

While epidemic encephalitis is probably not a new malady, its pandemic prevalence during the winter of 1916 and 1917 directed attention to the disease in such a direct and forceful way as to make it appear, at that time, that a new disease had been discovered. Careful investigation, however, would lead one to doubt the modernity of this disease since it would seem that the epidemic ophthalmoplegia described during the influenza epidemic of 1712 was without doubt a form of epidemic encephalitis. Whether or not the disease is a new entity is, however, more academic than practical. That such a disease condition exists, that it occurs in epidemic form, that in some epidemics it is highly fatal, that little is known regarding its prevention or treatment and that distressing sequelae are discouragingly common, are points of far greater interest to the practitioner of medicine.

The present epidemic in St. Louis County has shown unusual distribution insofar as this epidemic is largely confined to one suburb of St. Louis with a total population of 200,000, while the adjacent city of St. Louis proper with a population of 800,000 has been much more lightly visited by the scourge. A report of August 21 indicated the presence of 129 cases in this area with 12 deaths.* All of the cases have developed with great rapidity, the first case being reported on the last day of July. Epidemiologic surveys so far show no contact relationship between the cases. In only one instance has more than one case developed in a single family. Persons of all ages have been affected, though older adults predominate. While these factors distinguish the current epidemic, the manifestations of the disease are characteristic and no doubt is expressed regarding the accuracy of the diagnoses.

* A report dated September 1, brings the figures up to 283 cases with 41 deaths.

While it is true that the infecting organism, and surely this must be a bacterial disease, has not yet been determined, the mainstay of treatment appears to be the intramuscular injection of convalescent serum, to be followed in the later stages by the use of atropine or other preparations of belladonna. Every effort is being directed toward the bacteriologic study of this scourge and it is to be hoped that the quest will be successful, opening the way for a more satisfactory prophylaxis and treatment.

In view of the magnitude of the present epidemic it is particularly interesting and timely to note that careful attention is being focused upon the possibility of epidemic encephalitis being a cause of various psychoses. Rolleston* cites four recent reports by careful observers indicating that certain hallucinatory syndromes, confusional states, amyotrophies and some of the simple dementia resembling dementia praecox, may be the sequelae of epidemic encephalitis. It is even suggested that in some instances an influenzal-like attack, which in its acute stages manifested none of the typical signs of epidemic encephalitis, may, nevertheless, be accompanied by an encephalitic infection, and at a period of months or years be followed by a typical Parkinsonian syndrome or even a true psychosis.

* Rolleston, J. D.: International Medical Annual, 1933, p. 153.

MINNESOTA ATTACKS THE UNEMPLOYMENT PROBLEM

Some of our more optimistic economists have almost convinced the great American people that they are slowly beginning to emerge from that state of depression which has engulfed the entire world for nearly five years. This is good news for all of us, but as humanitarians we should be vitally interested in preventing the occurrence of another catastrophe of such proportions.

In the midst of every economic depression, unemployment, with its tragic consequences, stalks along. No one knows how to cure it, yet everyone has a solution. The lack of information as to the causes of unemployment, as well as its effect upon individuals and institutions, leads to ill-founded proposals for relief that often make the cure more dangerous to the welfare of society than the disease itself. No one knows how many of the unemployed are incapacitated, wholly or in part, mentally or physically. No one knows how many may be retrained or re-educated. We do not know which industries are on the down grade and contributing most to the evils of unemployment as compared to those on the upgrade. Additional perplexing problems are the relation of age

to employment in various occupations, and the effect of unemployment on family relations, public health and crime. It seems like a colossal undertaking to obtain these facts, and yet without them, no constructive worthwhile solution can possibly be evolved.

The University of Minnesota has accepted this responsibility insofar as its resources will permit. It makes no pretense of studying the unemployment problem in all its various aspects. It aims only to attack the problem from the standpoint of the local community. Since each community has separate and distinct problems of its own, it is necessary to conduct a research of this nature along individual lines. However, the general plan adopted by the University of Minnesota can and should be followed by other institutions.

As organized, there are three distinct phases of the work, each conducted by a committee. The committee on economic aspects of unemployment, under the direction of Dr. A. H. Hansen, professor of economics, University of Minnesota, has made an intensive study of five hundred business organizations in Minneapolis, St. Paul and Duluth, to measure the character and volume of employment and unemployment. This survey includes not only studies of employment trends by industries and occupations, but also throws much needed light on the extent to which technologic and other changes in production and distribution are affecting the working population of these three cities.

The second phase of the work is undertaken by the committee on individual diagnosis and training, with Dr. Donald G. Paterson, professor of psychology, University of Minnesota, acting as chairman. The objective of this committee is to discover to what extent unemployed individuals can be aided through adequate vocational diagnosis, counsel and retraining. An intensive study of 4,000 unemployed persons and 4,000 steadily employed persons as a control group, has been undertaken in order to discover the usefulness of scientific methods of vocational diagnosis, and the extent to which vocationally maladjusted individuals can be retrained in lines of work for which they appear to be better fitted.

The third phase of the work is organized under the Tri-City Employment Stabilization Committee, working in cooperation with the University's Research Institute and the Minnesota Industrial Commission. The aim of this committee is to establish a unified system of labor clearance, so that the free public employment offices may render an increasingly effective service to employers and employees. An important work of this committee has been the establishment of adequate statistical indexes of occupational and industrial trends and conditions in each city, as a background for effective vocational guidance and placement.

The three projects: the study of the economic aspects of unemployment, the experiments in individual diagnosis and retraining, and the development of public employment agencies, taken together constitute an experimental employment clinic, which aims to accomplish the following definite results:

1. To assist management, through information and guidance, and to eliminate unnecessary employment.

2. To ascertain methods to alleviate, by sound management and community organization, such unemployment as is unavoidable in the present state of the evolution of society.

3. To develop technics to improve the quality of the labor force, by removing as far as possible, physical, personality, and training defects.

4. To devise means to increase the mobility and flexibility of the labor force by vocational guidance and retraining in the light of information made available through a continuous study of occupational shifts in the community.

5. To assist employers, through a system of public employment offices, operated by scientifically trained personnel, to find the properly qualified employees. This involves not merely a study of the aptitudes of the labor personnel, but also thoroughgoing job analyses of local industries and business organizations.

6. To assist the individual worker to discover his own aptitudes and to find the job for which he is fitted.

From the above brief outline, it should be apparent that each part of the work dovetails with every other part, and it is hoped that such a coordinated attack on the complex and baffling problems of unemployment will bear fruit in the future development of a more stabilized program in the Northwest.

MANUFACTURE OF NARCOTICS LIMITED

Of vital interest to everyone, but to physicians particularly, is the recent action of the League of Nations in limiting the manufacture and distribution of narcotics.

For more than two years, proponents of the League's narcotics limitation convention have been fighting certain powerful chemical combines and international narcotic rings. The contraband commerce in drugs, which this pact aims to check, has been a source of great profit to everyone engaged in the drug traffic. It has been estimated that the annual profits from the illicit sale of heroin are

never less than 25,000,000 pounds sterling. It was to be expected, therefore, that any limitations would not be effected without considerable difficulty.

However, the issue was definitely settled on April 10, 1933, when the necessary twenty-five nations ratified the narcotics limitation convention. This action creates a precedent in international affairs, because the provisions of the treaty constitute an infringement upon the national sovereignty of each of the ratifying governments, thus representing a sacrifice of national pride in order to curtail the narcotic traffic. It is particularly gratifying to note that Turkey, once the worst offender, has joined efforts with the League of Nations, although as one of the most important opium growers in the world, Turkey's commercial interests are opposed to this course.

The new pact establishes a board of eight members who will meet in Geneva, and on the basis of estimates submitted by the various countries, dictate how much each nation may produce for the next year. Production and distribution will be limited strictly to the world's actual medical and scientific needs.

IOWA HEART ASSOCIATION MEETS

All members of the Iowa Heart Association, the Iowa Clinical Association, and members of the Iowa State Medical Society are cordially invited to attend the fall meeting of the Iowa Heart Association which will be held at the State University of Iowa, College of Medicine, Iowa City, Iowa, Saturday, September 30. Beginning at 9:00 a. m., the following unusually interesting, worthwhile and original program will be presented:

Greetings, Fred M. Smith, M.D., Iowa City; Discussion of Right and Left Ventricular Heart Failure, H. M. Korns, M.D., Iowa City; Clinical Discussion of Heart Bloc, D. J. Glomset, M.D., Des Moines; Some Circulatory Accidents of the Heart, A. A. Johnson, M.D., Council Bluffs; Luetic Aortitis, L. E. Cooley, M.D., Dubuque; The Treatment of the Failing Heart in General Practice, R. N. Larimer, M.D., Sioux City; Transposition of the Great Vessels, Julius Weingart, M.D., Des Moines; Bullet Wound of Heart With Bullet Retained—Pardee R-T Curve Persisting After Three Years—Complete Right Bundle Branch Block in Patient Twenty-one Years Old With Rheumatic Heart Disease (illustrated), Walter L. Bierring, M.D., Des Moines.

After the noon luncheon the program will consist of papers on: The Heart Specialist Himself, C. D. Mercer, M.D., West Union; Vasomotor Disturbances, George B. Crow, M.D., Burlington; Case of Multiple Aortic Aneurysms, M. C. Wheelock, M.D., Sioux City; Sphygmomanometry in Heart Disease, John C. Parsons, M.D., Creston; Congenital Heart Disease, Frank M. Fuller, M.D., Keokuk; and a symposium on Experimental and Clinical Use of Theophylline, with the following speakers: Action of Theophylline on Coronary Circulation as Determined by Profusion Experiments, H. M. Hurevitz, M.D., Iowa City; Therapeutic Action of Theophylline on Experimentally Induced Cardiac Infarction, W. M. Fowler, M.D., Iowa City; Therapeutic Action of Theophylline in Arteriosclerotic Heart Disease with Congestive Failure, W. D. Paul, M.D., Iowa City; The Action of Theophylline in Angina Pectoris and Coronary Occlusion, H. W. Rathe, M.D., Waverly.

POLK COUNTY ADOPTS RESOLUTIONS PERTAINING TO CONTRACT PRACTICE

The following resolutions were adopted by the Council of the Des Moines Academy of Medicine and Polk County Medical Society at its regular meeting August 29, 1933:

WHEREAS, certain kinds of contract practice of medicine now in use and similar forms of contract practice now being proposed throughout the country are inimical to the health and welfare of the patient and to the best interests of the medical profession and the public, therefore

BE IT RESOLVED, that the following definition of contract practice offered by the Judicial Council of the American Medical Association, and adopted by the House of Delegates of the Association, be used by the Council of the Des Moines Academy of Medicine and Polk County Medical Society as a proper definition in all discussions of contract practice.

> "By the term 'contract practice,' as applied to medicine, is meant the carrying out of an agreement between a physician or a group of physicians as principals or agents and a corporation, organization or individual, to furnish partial or full medical services to a group or class of individuals for a definite sum or for a fixed rate per capita."

BE IT FURTHER RESOLVED that the following statement of the Judicial Council of the American Medical Association be accepted by the Council of the Des Moines Academy of Medicine and Polk County Medical Society as a basis of all decisions regarding the status of contracts held by members of the Society:

"Contract practice *per se* is not unethical. However, certain features or conditions if

present make a contract unethical, among which are: (1) When there is a solicitation of patients, directly or indirectly. (2) When there is underbidding to secure contracts. (3) When the compensation is inadequate to assure good medical service. (4) When there is interference with reasonable competition in a community. (5) When free choice of a physician is prevented. (6) When the conditions of his employment make it impossible to render adequate service to his patients. (7) When the contract because of any of its provisions or practical results is contrary to sound public policy.

"Each contract should be considered on its own merits and in the light of surrounding conditions. Judgment should not be obscured by immediate, temporary or local results. The decision as to its ethical or unethical nature must be based on the ultimate effect, for good or ill, on the people as a whole."

Be it further resolved that all contracts held by members of the Des Moines Academy of Medicine and Polk County Medical Society be subject to review by the Council of the Society for approval or rejection.

Be it further resolved that no member of the Des Moines Academy of Medicine and Polk County Medical Society shall enter into contract with a corporation, organization or individual, to furnish partial or full medical services to a group or class of individuals for a definite sum or for a fixed rate per capita, in such a manner as to definitely exclude competition, unless he shall first submit a copy of the proposed contract to the Council of the Society and it is approved by that body.

Be it further resolved that the decision of the Council in regard to any contract submitted to it for review shall be final and that the membership status of any member engaged in contract practice shall be consequent upon the decision of the Council in regard to his contract.

INTER-STATE POSTGRADUATE MEDICAL ASSOCIATION OF NORTH AMERICA

The annual international assembly of the Inter-State Postgraduate Medical Association of North America will be held in Cleveland, Ohio, October 16 to 20, inclusive. A brief survey of the program indicates that all five mornings of the session will be devoted to diagnostic clinics, conducted by distinguished clinicians from all parts of the country, while the afternoon and evening programs will consist of addresses, illustrated lectures and symposia A registration fee of five dollars admits all members of the profession in good standing and all members of the Iowa State Medical Society are cordially invited to attend.

The following physicians are tentatively scheduled to present clinics: Waltman Walters, M.D., University of Minnesota Graduate School of Medicine, Mayo Clinic, Rochester; Harlow Brooks, M.D., New York University and Bellevue Hospital Medical College, New York; Hugh H. Young, M.D., Johns Hopkins University School of Medicine, Baltimore; Charles H. Frazier, M.D., University of Pennsylvania School of Medicine, Philadelphia; James H. Means, M.D., Harvard University Medical School, Boston; John M. T. Finney, M.D., Johns Hopkins University School of Medicine, Baltimore; Alan Brown, M.D., University of Toronto Faculty of Medicine, Toronto, Canada; E. Starr Judd, M.D., University of Minnesota Graduate School of Medicine, Mayo Clinic, Rochester; Cyrus C. Sturgis, M.D., University of Michigan, Ann Arbor; P. Brooke Bland, M.D., Jefferson Medical College of Philadelphia, Philadelphia; R. W. Scott, M.D., Western Reserve University School of Medicine, Cleveland; Hugh Cabot, M.D., University of Minnesota Graduate School of Medicine, Mayo Clinic, Rochester; George P. Muller, M.D., Graduate School of Medicine, University of Pennsylvania, Philadelphia; Otto H. Schwartz, M.D., Washington University School of Medicine, St. Louis; Warfield T. Longcope, M.D., Johns Hopkins University School of Medicine, Baltimore; Burton J. Lee, M.D., Cornell University Medical College, New York; Frederick J. Kalteyer, M.D., Jefferson Medical College of Philadelphia, Philadelphia; W. McKim Marriott, M.D., Washington University School of Medicine, St. Louis; Frank H. Lahey, M.D., Lahey Clinic, Boston; Howard C. Naffziger, M.D., University of California Medical School, San Francisco; Irwin Abell, M.D., University of Louisville School of Medicine, Louisville; Louis J. Karnosh, M.D., Western Reserve University School of Medicine, Cleveland; Dean D. Lewis, M.D., Johns Hopkins University School of Medicine, Baltimore; John J. Moorhead, M.D., New York Postgraduate Medical School, New York; William B. Hendry, M.D., University of Toronto Faculty of Medicine, Toronto, Canada; Fielding O. Lewis, M.D., Jefferson Medical College of Philadelphia, Philadelphia; William D. Haggard, M.D., Vanderbilt University School of Medicine, Nashville; George Crile, M.D., Cleveland Clinic, Cleveland; Elliott P. Joslin, M.D., Harvard University Medical School, Boston; Priscilla White, M.D., New England Deaconess Hospital, Boston; Lewellys F. Barker, M.D.,

Johns Hopkins University School of Medicine, Baltimore; Henry A. Christian, Harvard University Medical School, Boston; John F. Erdmann, M.D., Postgraduate Hospital of Columbia University, New York; William E. Lower, M.D., Cleveland Clinic, Cleveland.

Each of the above named clinicians will also present an especially prepared address, in addition to lectures given by the following prominent authorities: William E. Robertson, M.D., Philadelphia General Hospital, Philadelphia; Walter E. Dandy, M.D., Johns Hopkins University School of Medicine, Baltimore; Arthur D. Bevan, M.D., Rush Medical College of the University of Chicago, Chicago; Charles A. Elliott, M.D., Northwestern University School of Medicine, Chicago; Fred W. Rankin, M.D., Lexington, Kentucky; Leonard G. Rowntree, M.D., Research Clinician to the Philadelphia General Hospital, Philadelphia; Arthur C. Christie, M.D. George Washington University Medical School, Washington, D.C.; Gordon B. New, M.D., University of Minnesota Graduate School of Medicine, Mayo Clinic, Rochester; Frank C. Knowles, M.D., Jefferson Medical College of Philadelphia, Philadelphia; Elliott C. Cutler, M.D., Harvard University Medical School, Boston; Bernard H. Nichols, M.D., Cleveland Clinic, Cleveland; Charles H. Mayo, M.D., Mayo Clinic, Rochester; Joseph T. Wearn, M.D., Western Reserve University School of Medicine, Cleveland; Elsworth S. Smith, Washington University School of Medicine, St. Louis; Joseph F. McCarthy, New York Postgraduate Medical School, New York; George V. I. Brown, M.D., University of Wisconsin Medical School, Milwaukee; Edward E. Archibald, M.D., McGill University Faculty of Medicine, Montreal, Canada; Willis F. Manges, M.D., Jefferson Medical College, Philadelphia; Edward L. Bauer, M.D., Jefferson Medical College, Philadelphia; William J. Mayo, M.D., Mayo Clinic, Rochester.

The assembly will close with a banquet and evening program, Friday, October 20.

THE OPEN FORUM

EDITOR'S NOTE: *The following letter was written in response to a request that Dr. Artis set forth in a brief form some of the essentials of his proposed plan for a Medical Budget Board—a board designed to assure funds for the retirement of medical bills without resorting to a plan of medical insurance. Constructive thinking and planning within the profession of the economic problems closely identified with the practice of medicine may do much toward continuing the practice of medicine unhandicapped by lay agencies or federal control.*

July 28, 1933.

Dear Dr. Simmons: The following is in response to your suggestion of "outlining briefly and in narrative form your proposed plan" of the Medical Budget.

Ladies and Gentlemen of the Profession: Hasn't the sport of hunting fees and collections like wild game grown a bit stale? The Indian did not know how to domesticate grain, cattle, hogs, and chickens so that he could go to his fields and get them when he pleased. Rather he would walk tiresome days and pray to the Great Spirit that luck might enable him to capture a doe or a stag. Do we not get our collections by stalking them in a similar way? We have not yet learned to cause our fees to collect in pens about our home so that when they are needed we know that they are in the pen ready for us.

The Medical Budget will provide such pens. A Medical Budget Board incorporated in each county with branches in each community, will collect medical savings, (not insurance), place it in a safe bank on interest bearing deposit, cash the checks written for medical purposes and go about in the community urging savings by the approved means, either deductions from checks or the sale of produce or labor. This to be used for a doctor of medicine, dentist, nurse, hospital, prescription druggist, old age care, and burial, *only*.

The profession can then, with high hopes of success, gently but firmly refuse to work unless there is money in the budget savings or cash on their counter. (Those who do not insist on cash will get all the tricky accounts.) The more consistently we make the stand for cash the sooner a budget will be established. Some patients will be lost when we insist upon this procedure but others will be gained for the same reason. They will soon see that we mean business and take it for granted. Cash payment is a habit.

After a designated amount is accumulated, for example, $1,000; $300 for sickness, $500 for old age care, and $200 for burial, the further deductions from earnings will be turned back to the patient. The budget office will likely be maintained

by the interest on savings and the charges on checks, thus making the doctor and the patient bear the burden proportionately. This leaves all the money actually deposited at the disposal of the depositor.

Is there anyone outside of the profession who will work without cash? I believe we are the last to demand it and then it is in order that we may turn our attention more strictly to professional things and attend less to the financial side. In the plan under discussion, the finances will take care of themselves automatically and a scale of charges can be adjusted much more precisely. Let us organize these budgets, making a backbone instead of a wishbone proposition of it. We are then the first to be thought of when the patient pays his bills instead of the last. It will swing the great middle class from credit to cash for their medical attention.

State Medicine, or the control of medicine by an overlording group, (the nightmare of physicians) should vanish.

The budget is a specific or an antitoxin for our collection ills. We can then attend to the profession strictly, the pay and the living taking care of themselves automatically, because at each consultation the patient gives his check for the amount immediately. We can tell him that cash business is always cheaper for him and better for both of us.

How can the girl in the dime store on $312 a year pay as much for her medical attention as the patients with $1,000 to $5,000 incomes. Because of this inequality some such rating as the following might be used. This scale should be prepared in the office for each individual. Let the upper figure of the factor represent one-tenth of one per cent of the annual net income, from all sources. Let the lower figure represent the number of dependents as three or five or nine.

Now the factors can quickly be made up from the following: as

$ .312/1= .3
1.000/6= .16
2.000/4= .5
3.000/3=1.
5.000/2=2.5
10.000/2=5.

Multiply the factor by the regular charge.
Therefore an office call of

2.00 × .3 =$ 0.60
2.00 × .16= 0.32
2.00 × .5 = 1.00
2.00 × 1. = 2.00
2.00 × 2.5 = 5.00
2.00 × 5. = 10.00

These last figures are what an ordinary office call would look like when worked upon by the factors.

The following points should be insisted upon:

1. The budget is unusually simple.
2. The budget is very probable of collection.
3. The budget is almost a specific for collection ills.
4. The budget gives all our time to the profession.
5. Entire freedom of choice is left to the patient.
6. Emergencies and hard times are met.

Respectfully submitted,
G. Hubert Artis, M.D.

HONOR SOCIETIES

The following seven county medical societies have 100 per cent membership, with no delinquent members, and all eligible physicians belonging to their respective county societies:

Adair
Boone
Ida
Marshall
Muscatine
Poweshiek
Van Buren

There are no delinquent members in the following twenty-four counties, although in each county there are physicians who have not affiliated with their professional organization, although they are eligible to do so.

Benton
Black Hawk
Cherokee
Clarke
Clayton
Davis
Emmet
Hardin
Humboldt
Linn
Louisa
Lucas
Madison
Marion
Monroe
Palo Alto
Ringgold
Scott
Shelby
Tama
Taylor
Warren
Washington
Wayne

In spite of the excellent membership record of these thirty-one counties, the total number of delinquent members for the entire state is 264, and the total number of eligible non-members is 367. In addition to these, there are a number of practicing physicians who have not been classified by the county societies as to their eligibility to membership.

WOMAN'S AUXILIARY NEWS

Edited by the Press and Publicity Committee

MRS. OLIVER J. FAY, *Chairman,* 10 Thirty-fifth Street, Des Moines

A MESSAGE FROM THE NATIONAL PRESIDENT

To All Members of the Auxiliary:

It is a great privilege to live in this momentous period of our world's history. Nations, states and individuals discard old customs, laws and conventions. Even the sacred ethics of the medical profession are being questioned by a skeptical world. On the heels of an era of unprecedented prosperity and unbridled speculation, comes a period of depression from which we have not as yet emerged. No individual escapes, no group or organization is immune. Only the good, like royal metal, should pass unscathed through the revolutionary fires. Each one of us can contribute her share toward that end by steadfast adherence to her ideals, even though this does seem to be an era of rapidly changing ideas and ideals. It is good for us to come together for these annual meetings and discuss our problems. Every one of them is of interest and importance to the members of our Auxiliary. It is well for us to consider them carefully and decide for ourselves what is the right and honest course to pursue. The weight of our united opinion is powerful, and I have the conviction that by standing together and deciding our problems very honestly, fairly and unselfishly we can find a solution for all our Auxiliary questions.

In our democratic plan of medical and auxiliary organization, the county medical society is the basic unit. It is the only door through which admission may be secured to the state, and national auxiliaries. It is the sole judge of the applicant's membership qualifications. It is the local representative of the state and national organizations. It is the most important unit and therefore has certain very definite and grave responsibilities.

When the county society auxiliary fails, the state and national groups fail. The state auxiliary is strong, active and achieving, only when its component county auxiliary units seriously assume and discharge their responsibilities. The parent organizations are dependent upon their basic units. I believe that this fundamental fact is too often overlooked or ignored by the members and officers of both state and county auxiliaries.

I am a firm believer in state's rights. I am going to stress the educational program, the public relations program, the advance of Hygeia for each individual state, and a system of press and publicity work among members of neighboring state auxiliaries.

Right now we all realize that the auxiliary picture is changing almost by leaps and bounds; it is hard to keep pace with the times, but state by state and each county with its state joining in working plans, our picture can be kept to its true color scheme. Our brushes must never be idle, our color tubes must be ever ready to tint, daub, or even splash on the paint. Our committee chairwomen are all skillful artists in their line of work, and will be ever ready to suggest the right shade of blue, red, green or brown which you need to make your state picture worth the painting.

I believe every state and county president should make a systematic search for wasted effort in her county organization; should try to fill gaps, eliminating all overlapping in the program of work. It may be regarded as axiomatic that wherever mass activity or interest is concerned, a group must either *lead* or be *led.* I firmly believe there is no third possibility. The lead for all things in which medicine has close contact, and in which medical science or practice plays the vital role, should be taken by medical organizations and their lay representatives, the auxiliaries.

Our imperative need today is an undistorted sense of values, constructive thought, logical reasoning and sound judgment, combined with common sense and "team work." We as "doctor's wives" know that to no one is life level all the way; there are depths to go through, and heights to climb, and we need courage and inspiration. In offering you your national chairwomen, I assure you they are ready with inspiration if you will supply the courage to forge ahead.

If, as Shakespeare has remarked, "All the world's a stage and all the men and women merely players" thereon in a drama of mixed tragedy and comedy, let us resolve to "Act well our part, for there all honor lies." As the curtain rolls down on our very pleasant, happy and profitable Milwaukee meeting, let us each remember our own state, our own county; every state and every county, in this great country of ours is our stage. You, all auxiliary members, and I, are the players. The drama is waiting for us to take our parts. The curtain is slowly rolling and unfolding a new year. As your stage manager you will always find me ready to prompt your work, shift the scenery, start the orchestra or any other thing I can possibly do to help make this year one continuous success for all of us.

MRS. JAMES BLAKE,
National President.

SOCIETY PROCEEDINGS

Appanoose County

The annual picnic of the Appanoose County Medical Society was held Thursday, August 17, at Centerville, with the following program: Hereditary Diseases and Their Prevention, C. D. Fenton, M.D., of Bloomfield, and The Heart in Pregnancy, Edwin Gilfillan, M.D., also of Bloomfield.

Hardin County

The Hardin County Medical Society held a bimonthly meeting at the Hotel Winchester, Eldora, on Thursday, July 27. Immediately following dinner at six o'clock, M. W. Binger, M.D., of the Mayo Clinic, Rochester, Minnesota, addressed the society on The Treatment and Important Characteristics of Nephritis.

W. E. Marsh, M.D., Secretary.

Louisa County

Members of the Louisa County Medical Society met in Grandview, Thursday, August 17, and were addressed by the Hon. E. C. Eicher of Washington on the NRA. Clyde A. Boice, M.D., also of Washington, spoke briefly on health conditions in the county. The next meeting will be held in Columbus Junction, Thursday, September 14.

E. R. King, M.D., Secretary.

Austin Flint-Cedar Valley Medical Society

The fall meeting of the Austin Flint-Cedar Valley Medical Society will be held in Charles City, Wednesday, October 4, at the Hildreth Hotel. A social hour and luncheon will be held from 11:00 a. m. to 1:00 p. m., after which the physicians will adjourn for a scientific session, while their wives are to be entertained by wives of the Charles City physicians. A banquet at six-thirty, with an evening program, concludes the session.

W. E. Long, M.D., Secretary.

Second Councilor District Picnic

The picnic held at Clear Lake, August 18, for members of the Second Councilor District, was a decided success. Physicians and their families reported a fine time. The afternoon was informally spent at various games and motor boat excursions. At 5:30 p. m., more than one hundred members and guests sat down to tables groaning with edibles that vanished rapidly under the ferocious appetites of the general assemblage. Members of the Woman's Auxiliary to the Cerro Gordo County Medical Society had charge of the dinner arrangements, and deserve high praise for the splendid way in which they handled their mission.

The main address on the evening program was delivered by Walter L. Bierring, M.D., of Des Moines. The title of the lecture was The History of Medicine, and it was indeed a masterful portrayal of advances made in scientific medicine. Dr. S. S. Westly of Manly, and Dr. T. A. Burke of Mason City, both



One group of physicians in attendance at the picnic.

gave interesting talks on personal impressions of European practice and hospital organization work. A rising vote of thanks was given the speakers of the evening. Everyone present enjoyed the festivities of the occasion, and endorsed a similar conclave for the coming year.

W. E. Long, M.D.

INTERESTING NEWS

In Brief

Varicose veins unnoted by the eye have shown up in infra-red photographs.

At least 50,000 research papers are published annually on biologic problems.

About 500 people are killed by lightning each year in the United States and about 1,300 are injured.

Investigators at King's College, London, have obtained definite evidence of an anti-growth factor in the parathyroid gland.

Premature aging of women may be controlled by the hormone called "theelin," according to Werner and Collier of St. Louis.

Recent work at the Montefiore Hospital indicates that Vitamin C is essential for the utilization of iodine in the treatment of goiter.

Discovery of a chemical antidote for the toxin developed by the diphtheria bacillus in the human body is reported by a French bacteriologist.

The amount of Vitamin A present in milk and butter depends to a very large extent upon the concentration of Vitamin A in the food eaten by the cow.

Observers in Charleston, South Carolina, state that the thyroid gland varies in size according to age and sex and fluctuates in size according to the seasons of the year.

Dr. Andrew H. Woods, head of the Psychopathic Hospital, State University of Iowa, will conduct a survey of Scott county's suicide records, as a part of a nation-wide study of this problem.

Observations at Yale University would indicate that acidosis is not the result of too much acid in the body. If this observation is correct, the treatment of acidosis by alkalies appears irrational.

In partial explanation of London's remarkably low death rate, the tar-laden air from the city's fires held down by London fogs acts as an antiseptic in the destruction of many pathogenic bacteria.

The New York Postgraduate Medical School and Hospital, during its fifty years of service completed at the end of 1932, gave care to more than 1,800,000 persons, according to the recent annual report.

The United States Pharmacopoeia Committee of Revision has announced the formation of a Vitamin Advisory Board to aid physicians and pharmacists in giving patients vitamin preparations of standard potency.

A recent decision handed down by a judge of a district court in Iowa is to the effect that "a doctor may fix a fee for his services on the basis of skill required and, within reason, the ability of the patient to pay."

Of interest to Iowans is a news note in a recent book, "Famous First Facts," by Joseph Nathan Kane, in which he states that the first operation for appendicitis was performed in 1883, by Dr. William Grant of Davenport, Iowa.

Bill number 459 has recently passed the assembly and the senate in Wisconsin, proposing to require physicians to report to the state board of health the names of patients having cancer, carcinoma, sarcoma and other malignant growths.

Recent studies support the theory that alcoholic cirrhosis, long attributed to over-indulgence in alcoholic beverages, may be due not to the alcohol in the beverages, but to the phosphorus from the iron and steel beverage containers.

The Leslie Dana Gold Medal, awarded annually for the most outstanding achievements in the prevention of blindness and the conservation of vision, was presented to Dr. William H. Luedde, director of the department of ophthalmology in the St. Louis University School of Medicine.

Announcement made by the United States Public Health Services, National Institute of Health, again calls attention to the germ theory of cancer production. Workers at the Institute have been able to produce cancers in experimental animals by the injection of a spore-bearing bacterium isolated from a proved case of cancer of the breast.

The state of Iowa cares for approximately 15,000 people in its state institutions. Of these, less than 4,000 are held in the penal institutions, that is, the reformatory at Anamosa, the penitentiary at Fort Madison, the Industrial School for Boys at Eldora, the School for Girls at Mitchellville, and the Women's Reformatory at Rockwell City. In addition to the above named figure, the state is caring for nearly 9,000 mental defectives in its institutions.

PERSONAL MENTION

Dr. Edward Rhomberg, who has practiced for two years at Williams, has moved to Guttenberg.

Dr. Meredith Mallory of Orlando, Florida, formerly an associate of Dr. Walter L. Bierring, was a visitor in the city of Des Moines, August 3 and 4.

Dr. Harold T. Larsen, a local Fort Dodge boy, has returned to that city, to begin the practice of medicine and surgery. Dr. Larsen was graduated from the State University of Iowa College of Medicine in 1932, and has served a year's interneship at the Charles T. Miller Clinic in St. Paul, Minnesota.

Dr. Kuno Struck of Davenport, spoke on "Heredity" at the noon meeting of the Exchange Club, held in Davenport, August 4.

Dr. Guenther F. Spielhagen has become associated with Dr. George H. Scanlon of Iowa City. For the past year Dr. Spielhagen has been devoting his time to special work under Dr. Fred Smith in the department of internal medicine at the University Hospital.

Dr. George A. Paschal, formerly of Stratford, has located in Williams, where he will continue the practice of medicine and surgery.

Dr. E. B. Hoeven of Ottumwa, addressed the local Kiwanis Club, Monday evening, August 14, on "The Romance of Medicine."

Dr. W. S. Balkema, formerly of Madison, Wisconsin, has moved to Newton, where he has established offices in the Alfree Building.

Dr. F. J. Bries, who has been practicing medicine in Sumner for the past eleven years, has made arrangements to leave that city and locate in Holy Cross.

Dr. Eli Grimes of Des Moines, has written an article on "Studies in the Natural History of Phthisis," which appeared in the July 1933 issue of the American Review of Tuberculosis.

Dr. A. H. Dulmes, who for the past three years has been associated with Dr. Henry Mol of Grundy Center, has arranged to take over the practice of a physician at Klemme, Iowa.

Dr. George H. Hansmann, assistant professor of pathology and bacteriology at the University of Iowa College of Medicine, is leaving that institution, to become associate professor of pathology at Georgetown University in Washington, D. C.

MARRIAGES

Miss Antoinette C. Hammang of Fond du Lac, Wisconsin, and Dr. Joseph W. Holtey of Ossian, Iowa, were married August 21, in St. Mary's Church at Fond du Lac. Dr. and Mrs. Holtey left immediately after the ceremony for a motor trip through the east, returning to Ossian, August 28, where Dr. Holtey has practiced medicine for over a year.

The marriage of Miss Grace Ettinger of Iowa City to Dr. Charles H. Coughlan, also of Iowa City, took place August 5 at the Presbyterian Church in Iowa City. After a two weeks' wedding trip, Dr. and Mrs. Coughlan returned to Iowa City, where they will make their home. Dr. Coughlan is a staff member of the department of pathology, State University of Iowa, College of Medicine.

DEATH NOTICES

Cady, Clinton Colfax, of Alden, aged sixty-three, died July 27, as the result of a paralytic stroke, which occurred a few months ago. He was graduated in 1900 from the Drake University College of Medicine and at the time of his death was a member of the Hardin County Medical Society.

Chalmers, Francis Edward, of George, aged fifty-eight, died August 1, from cancer of the pancreas. He was graduated in 1904 from the University of Toronto Faculty of Medicine, and had in past years, been a member of the Lyon County Medical Society.

Thompson, Daniel Whitfield, of Council Bluffs, aged forty-nine, died August 13, after a month's illness. He was graduated in 1909 from the Nebraska College of Medicine, and at the time of his death was a member of the Pottawattamie County Medical Society.

THE 1933 GRADUATE FORTNIGHT OF THE NEW YORK ACADEMY OF MEDICINE

Metabolic disorders will be the theme of the 1933 Graduate Fortnight of the New York Academy of Medicine. Two weeks of intensive study, from October 23 to November 3, inclusive, will be devoted to this important branch of medical science. The theoretical, physiologic and pathologic phases of metabolism, as well as of certain of the associated endocrinologic problems will be treated in a series of round table discussions and clinical demonstrations. A complete program and registration blank may be secured by addressing Dr. Frederick P. Reynolds, 2 East 103rd Street, New York City.

RESOLUTIONS ADOPTED BY THE CATHOLIC HOSPITAL ASSOCIATION OF THE UNITED STATES AND CANADA

The following items are excerpts from the resolutions unanimously adopted at the closing meeting of the Catholic Hospital Association of the United States and Canada at its Eighteenth Annual Convention, held in St. Louis, June 16, 1933:

XXVII. Birth Control, Sex Education, and Eugenics

Be It Further Resolved, That this Association hereby formally and openly declare its firm adherence to the teachings of His Holiness contained in the encyclical *Casti Connubii* and that, therefore, it regard as fundamental in all its policies affecting the teaching function of the hospital and the hospital's public relations, the Holy Father's pronouncement that birth control "is an offense against the law of God and of nature" and that, therefore, our hospitals will tolerate no practices or acts, expressed or implied, contrary to this fundamental principle; that furthermore, in the exercise of that same teaching function of the hospital and the hospital's public relations it will base its policies upon the recent decree of the Holy Office on sex education and eugenics.

XXXIV. Secondary Importance of Medical Economics

Be It Further Resolved, That this Association openly declare its adherence to the principle that the central problem in each hospital is the problem of supplying effective medical care to the patient; that, therefore, all other problems no matter how urgent temporarily they may be must be viewed and solved with relation to their significance to the central problem; that, therefore, medical and hospital economics while urgently important cannot be considered dominant; that, therefore, all plans of financial remuneration to the hospital or to the medical and nursing profession which focus attention upon the economic aspects in whatever form to the neglect of the dominant position of the medical nursing service, must be regarded with suspicion and that, therefore, this Association hereby utter an official word of warning to all of its members to seek in such plans first and foremost the effect which they might have upon the medical service rendered by the institution.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. HENRY B. YOUNG, Burlington
DR. TOM. B. THROCKMORTON, Des Moines
DR. FRANK M. FULLER, Keokuk
DR. WALTER L. BIERRING, Des Moines
DR. JOHN T. MCCLINTOCK, Iowa City

The History of Medicine in Lucas County

TOM MORFORD THROCKMORTON, A.M., M.D.,
Chariton

TOM BENTLEY THROCKMORTON, B.Sc., M.D.,
Des Moines

(Continued from last month)

Dr. Albert Lee Yocom, Sr.

Dr. Albert Lee Yocom, Sr., was born in Waynesville, Dewitt County, Illinois, July 8, 1855. He was a son of Elijah and Caroline A. (Higgins) Yocom. His father was a native of Kentucky; his mother was of German ancestry. Albert obtained his literary education in the public schools



Albert Lee Yocom, Sr., M.D.
1855—1932

of Waynesville. He was reared to manhood on his father's farm and began the study of medicine under the direction of Dr. J. A. Starkey, of Waynesville. He attended a course of lectures in the College of Physicians and Surgeons in Keokuk, Iowa, from which institution he was graduated in 1886. Having practiced three years prior to his graduation in medicine at Newbern, Marion County, Iowa, he came to Chariton in 1889, instead of relocating in his former field of endeavor.

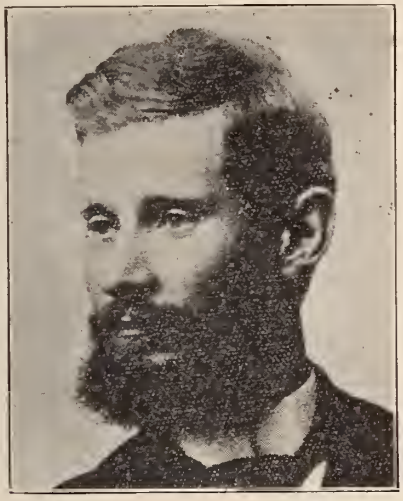
Dr. Yocom was married September 8, 1879, to Miss Anna B. Short. She was a native of Hayworth, McLean County, Illinois. The doctor became the father of six children; three sons and three daughters. Dr. Yocom was a member of the county and state medical societies and of the American Medical Association. He was also a member of the Masonic Order.

The doctor, on March 28, 1932, was up and about his work as usual. During the afternoon of that date he attended funeral services for Dr. C. C. Calbreath, acting as one of the honorary pall-bearers. On the following morning he became ill and during the day, his condition having grown progressively worse, he was removed to his son's hospital. Dr. Albert, Jr., performed an emergency operation and removed a gangrenous appendix. The infection was a vicious one and the fight for life was an uphill pull. In spite of every attention, the doctor gradually failed and death came peacefully early on the morning of March 30, 1932.

The writer sat by Dr. Yocom at the funeral service of Dr. Calbreath. He also talked and visited with him at the cemetery. That death was stalking so near never once entered the field of conversation. His sudden death was a shock to all. The funeral services were held at the Beardsley funeral home on Sunday, April 3, 1932. Interment was in the Chariton cemetery.

Dr. Frank Hall Boynton

Dr. Frank Hall Boynton was born in Hartford, Van Buren County, Michigan, January 8, 1866. He was a son of Cyrus and Emma (Hall) Boynton, who were natives of New York state. In 1885, he matriculated in the Homeopathic Medical Department of the State University of Iowa, Iowa City, and received his diploma from that institution in the class of 1887. He then located at Mt. Pleasant, Iowa, where he entered into a partnership with Dr. J. H. Drake, a brother-in-law. This association continued until April 8, 1890, when he



Frank Hall Boynton, M.D.
1866—

located in Chariton. The doctor was married to Miss Fannie Hunter, of Mt. Pleasant, Iowa, June 5, 1888. Three daughters came to bless the home. He was a member of Chariton Lodge No. 64 Independent Order of Odd Fellows. Dr. Boynton was a very pleasant gentleman, easily approached, and was fair and just to the medical fraternity. In 1916 he moved, with his family, to Los Angeles, California, where he has since resided. His departure was a distinct loss to the community and to the local profession.

Dr. Augustus H. Warren

Dr. Augustus H. Warren was a native of Pennsylvania. He was licensed to practice by the Iowa State Board of Medical Examiners, February 8, 1889. His certificate was filed in the county June 19, 1890. Apparently the doctor did not remain long in the town. There is no further record.

Dr. Levi Peter Warrington

Dr. Levi Peter Warrington was born in Illinois in 1854. He came to Lucas County and located in Chariton, July 23, 1890. He was graduated from the Chicago Medical College, Chicago, Illinois, March 23, 1886. He married Miss May Jackson of Chariton, about 1892. His stay in the city was of some three or four years' duration. We have no record or knowledge of where he



Levi Peter Warrington, M.D.
1854—

went, or where he may have relocated, although diligent inquiry has been made. There was some talk, about the time of his departure that he might enter the ministry.

Dr. Artemas Brown

Dr. Artemas Brown, the oldest son of the Rev. Artemas Brown, a presiding elder in the Methodist Church, was born in 1852. He was graduated from the College of Physicians and Surgeons, Keokuk, Iowa, in the class of 1887 and located in Chariton, about the year 1890. His residence in the city was of short duration. He was residing in Berwyn, Illinois when last heard from a few years ago.

Dr. Sheldon Pierce Hewins

Dr. Sheldon Pierce Hewins was born in 1860. He was a graduate of the Chicago Homeopathic Medical College, Chicago, Illinois, in the class of 1888 and came to Chariton, about 1892, where he remained for three or four years. He was married to Miss Tillie Clouse, a daughter of Mr. John Clouse, who was an early settler in Lucas County. Dr. Hewins was located in Olean, Cattaraugus County, New York, in 1926.

Dr. Edgar L. Field

Dr. Edgar L. Field was born in New York, near Niagara Falls. He was located at Leighton, Mahaska County, Iowa, before coming to Chariton in 1892. He was licensed by the state after "eight years of practice in Iowa" November 26, 1886,

according to the certificate filed in Chariton, December 6, 1892. The doctor and his family moved to Louisiana about 1907. When last heard from in 1915 the doctor was in Houston, Texas.

Dr. Lydia Alice Myers

Dr. Lydia Alice Myers was a native of Illinois. She was graduated from the Iowa College of Physicians and Surgeons, Des Moines, Iowa, in 1892. Dr. Myers located in Chariton in 1893, but continued in practice only a short time. We have no record as to when she left the town or where she may have relocated.

Dr. James Peter Volby

Dr. James Peter Volby was born in Denmark. He was a graduate of the College of Physicians and Surgeons, Chicago, Illinois, in the class of 1890, and came from Clinton, Iowa, to Chariton in 1894. We have no record as to the time of his departure.

Dr. William Kermit Johnson

Dr. William Kermit Johnson was born in New York in 1856. He was a graduate of the Keokuk Medical College, Keokuk, Iowa, in the class of 1891. He came from Creston, Iowa, to Chariton in 1896. The doctor did not remain long in the community and when last heard from, in 1925, was located in Garnett, Kansas.

Dr. Alfred Grant Hopkins

Dr. Alfred Grant Hopkins was a native of New York state. He was graduated from the College of Physicians and Surgeons, Chicago, Illinois, in 1890, and came from Council Bluffs, Iowa, to Chariton in 1896. No further record is available.

Dr. Theodore Barnes

Dr. Theodore Barnes was born in Iowa, in 1856. He came to Chariton about 1896, and, as a student, entered the office of Dr. John A. McKlveen. He was licensed by the State Board of Medical Examiners, August 5, 1898. Later he was graduated from the Eclectic Medical College, Cincinnati, Ohio, in the class of 1908. After a residence in Chariton for some ten or eleven years, during which time he was associated with Dr. McKlveen in general practice, he went to Wyoming where he took up a land claim. Afterward, he returned to Chariton; and later he moved to several other places. When last heard from, in 1925, he was in Des Moines. Since that time all trace of his whereabouts has been lost.

Dr. Albert Minear Fulton

Dr. Albert Minear Fulton was born in 1867. He was a graduate of the College of Physicians and Surgeons, Chicago, Illinois, in the class of 1893. He came from Fairfield, Iowa, to Chariton in September, 1897. He practiced in the city for three years, after which time he located in Thomas, Oklahoma. Unfortunately the doctor became a helpless invalid, and died of pneumonia in Villa Park, Illinois, November 3, 1932.

Dr. Charles Findlay Waldron

Dr. Charles Findlay Waldron had the peculiar distinction of being a physician, and a priest in the Catholic Church. He received his medical education in the Medical Department of the State University of Iowa, Iowa City, from which institution he was graduated March 4, 1874. He filed his certificate in the county, November 7, 1894. Whether Dr. Waldron was ever engaged in the practice of medicine, we do not know. While in Chariton he was priest of the Catholic Church. He was a well read man and was liked by the local medical profession. The junior author of this history remembers Father Waldron very well. On one occasion the priest visited the public schools. After scrutinizing the written work on the blackboard and observing the writer's name in connection with some of it, he remarked to the teacher that he was afraid the young man would never make a doctor because, judging from the sample of the handwriting on the blackboard, no druggist would be able to determine whether the prescription he chanced to write was for castor oil or calomel.

Dr. N. E. Wood

Dr. N. E. Wood was born in New York. He was a graduate of Bennett Medical College, Chicago, Illinois, receiving his diploma June 12, 1878. He filed his certificate in the county, November 20, 1898, but we have no further record of his activities.

Dr. William Edward Dale

Dr. William Edward Dale was a native of the "Bluegrass State." He was born in Kentucky in 1866. As a young man, he attended the University of Louisville Medical College, Louisville, Kentucky, and was graduated from that institution March 3, 1891. The doctor came to Chariton in 1898, but did not remain long in the community.

Dr. Bernard F. Dougherty

Dr. Bernard F. Dougherty was born April 16, 1860, at Lackoo, Church-Hill County, Donegal, Ireland. He was graduated in medicine from Trinity College, Dublin, Ireland, in 1888 and came to the United States that same year. After taking a postgraduate course in the College of Physicians and Surgeons, in Chicago, Illinois, from

which institution he received his doctor's degree in the class of 1898, the doctor came to Lucas County and located in Chariton in 1899. Dr. Dougherty limited his practice to office work and consultations. During the late World War he was a member of the local board of Lucas County for examining the men and inducting them into the service. He was fair, but fearless, in rendering his decisions. He likewise was equitable with his associates in practice. He died after a lingering illness, July 18, 1928, at the age of sixty-eight years. His body was cremated and his ashes returned to his native land where they repose in peace in the family burying ground in Donegal.

Dr. Barbara E. Dougherty

Dr. Barbara E. Dougherty, the wife of Dr. Bernard F. Dougherty, was born in Clifton, Illinois, March 19, 1868. She was a graduate of Ensworth Medical College, St. Joseph, Missouri, in the class of 1892. The doctor came to Lucas County, from Charles City, Iowa, May 8, 1899. With her husband, she purchased a drug store in Chariton. The building was located on the west side of the town square, and for years it was one of the best equipped stores of its kind. Here Dr. Barbara and her husband worked side by side until the death of the latter severed their earthly partnership. Dr. Barbara later sold the drug store, but she has continued to make her home in Chariton.

Dr. Clifford Brickell Moffit

Dr. Clifford Brickell Moffit was born in Pennsylvania in 1872. He was graduated from the College of Physicians and Surgeons, St. Louis, Missouri, March 18, 1892. The doctor came from Creston, Iowa, to Chariton, November 24, 1900. He was the first eye, ear, nose and throat specialist to locate in the town. His departure was sudden and for reasons unknown.

Dr. John Walter Sullivan Howell

Dr. John Walter Sullivan Howell was born in Illinois, in 1863. He was a graduate of Rush Medical College, Chicago, Illinois, in the class of 1891. The doctor came from Davenport, Iowa, to Chariton, in 1902, but remained only a short time. He was located in Akron, Ohio, in 1925.

Dr. David Quincy Storie

Dr. David Quincy Storie was born in Chariton, July 16, 1874. He was the second son of David Quincy and Delia Antoinette (Jackson) Storie, who were natives of New York. David Quincy, Jr., was graduated from the Chariton High School, March, 1892; and from Rush Medical College, Chicago, Illinois, in the class of 1901. Following his graduation he located in the town of his boyhood years. He was married to Miss Nellie M. Smith, a daughter of J. Fletcher and Jessie (Day) Smith, November 21, 1901. To this union were born three children: David Quincy Storie III, D.D.S.; Mrs. Martha L. Shaw and Mrs. Jessie A.



David Quincy Storie, M.D.
1874—1925

Morgan. Dr. Storie practiced medicine and surgery continuously in Chariton until June 21, 1925, when he was killed in an automobile accident near Northwood, Iowa. He was buried in the family lot in the Chariton cemetery.

Dr. Fred A. Saum

Dr. Fred A. Saum, born in 1859, was a graduate of the Drake University College of Medicine, Des Moines, Iowa, in the class of 1892 and came to Chariton from Adair, Iowa, about 1903. He practiced the specialty of eye, ear, nose and throat. He was married to Miss Nettie Poucher, a school teacher, in Chariton, who was a daughter of Mr. and Mrs. Hyrum Poucher, long time residents of Lucas. The doctor left Chariton about 1912. He was in Virginia when last heard from.

(To be continued next month)

MEDICAL HISTORY OF JEFFERSON COUNTY, IOWA

Dr. J. Frederick Clarke of Fairfield, Iowa, has kindly agreed to prepare a medical history of Jefferson County.

It is urged that any member of the Iowa State Medical Society having knowledge of important facts connected with the early history of medicine in Jefferson County, submit the same to Dr. Clarke at the earliest opportunity.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

DIET IN SINUS INFECTIONS AND COLDS—By Egon V. Ullmann, M.D.. formerly special lecturer for biology at the Oregon State College. Recipes and Menus by Elza Mez. The Macmillan Company, New York, 1933. Price, $2.00.

FETAL, NEWBORN AND MATERNAL MORBIDITY AND MORTALITY—A publication of the White House Conference on Child Health and Protection. D. Appleton-Century Company, New York and London, 1933. Price, $3.00.

HEALTH AND ENVIRONMENT—By Edgar Sydenstricker, chief statistician, United States Public Health Service; director of research Milbank Memorial Fund. McGraw-Hill Book Company, New York and London, 1933. Price, $2.50.

THE HISTORY AND EPIDEMIOLOGY OF SYPHILIS—By William Allen Pusey, A.M., M.D., LL.D., Emeritus Professor of Dermatology, University of Illinois. Charles C. Thomas Publishing Company, Springfield, Illinois, and Baltimore, Maryland, 1933. Price, $2.00.

INTERNATIONAL CLINICS, Volume III, Forty-third Series—Edited by Louis Hamman, M.D., visiting physician, Johns Hopkins Hospital, Baltimore, Maryland. J. B. Lippincott Company, Philadelphia, Montreal and London, 1933. Price, $3.00.

LIFE BEGINS AT FORTY—By Walter B. Pitkin, professor in journalism, Columbia University. McGraw-Hill Book Company, New York and London, 1932. Price, $1.50.

100,000,000 GUINEA PIGS—Dangers in Everyday Foods, Drugs and Cosmetics—By Arthur Kallet of Consumers' Research, Inc., and F. J. Schlink, of Consumer's Research, Inc. The Vanguard Press, New York, 1933. Price, $2.00.

RECTAL DISEASES IN OFFICE PRACTICE—By Lawrence Goldbacher, M.D., chief of the Department of Proctology, Women's Homeopathic Hospital, Philadelphia. Illustrated with 176 half-tones and line engravings, some in colors. L. Aubrook & Company, 1933. Price, $9.75.

SENILE CATARACT—METHODS OF OPERATING—By W. A. Fisher, M.D., F.A.C.S., Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College, formerly Professor of Clinical Ophthalmology, University of Illinois. 267 pages, 183 illustrations, 112 of which are colored. Published by the Chicago Eye, Ear, Nose and Throat College, Chicago, Illinois.

SURGICAL CLINICS OF NORTH AMERICA—Volume xiii, Number 3, Lahey Clinic Number, June 1933. 275 pages with 98 illustrations. Per clinic year, February 1933 to December 1933. W. B. Saunders & Company, Philadelphia and London, 1933. Price, paper, $12.00, cloth, $16.00 net.

SURGICAL CLINICS OF NORTH AMERICA—Volume xiii, No. 4, Mayo Clinic Number, August, 1933. Per clinic year, February, 1933, to December, 1933. Octavo of 215 pages with 65 illustrations. W. B. Saunders Company, 1933. Price, paper, $12.00; cloth, $16.00.

A TEXT BOOK OF NEUROPATHOLOGY—By Arthur Weil, M.D., Associate Professor of Neuropathology, Northwestern University Medical School, Chicago. Illustrated with 270 engravings. Lea & Febiger, Philadelphia, 1933. Price, $5.00 net.

BOOK REVIEWS

EGG, WHEAT OR MILK FREE DIETS

With recipes and food lists, by Ray M. Balyeat, M.A., M.D., F.A.C.P., Director of the Balyeat Hay Fever and Asthma Clinic, Associate Professor of Medicine and Lecturer on Diseases Due to Allergy, University of Oklahoma Medical School, assisted by Elmer M. Rusten, M.D., and Ralph Bowen, M.D., of the Balyeat Hay Fever and Asthma Clinic, Oklahoma City, Oklahoma. J. B. Lippincott Company, Philadelphia, 1933. Price, $2.50.

During the past four or five years our information regarding food allergy has multiplied itself with great rapidity so that today there is an actual and pressing need for a book giving concise and specific instructions in the maintenance of diets, particularly those eliminating eggs, wheat or milk, since it has been demonstrated that these are by far the commonest foods responsible for clinical allergy.

This book lists those foods containing these three elements as well as those free of these elements. It has been arranged to assist the physician and dietician in the selection of food lists and menus and to make easier the task of those who actually prepare diets.

The opening chapter of the book describes the role played by foods in allergic diseases and discusses these problems in a straightforward, concise and readily understandable fashion. Chapters two and three discuss the methods of testing and the types of food sensitive patients. These three chapters are not intended in any way to supplement instruction received from the physician, but rather to clarify questions which may ordinarily present themselves to the patient. The remaining discussions occupying some five-sixths of the space deals entirely with recipes and food suggestions useful to the allergic patient requiring special diet.

The volume appears to be exceptionally well written and should receive the hearty approval of physicians everywhere.

ESSENTIALS OF PRESCRIPTION WRITING

By Cary Eggleston, M.D., assistant professor of clinical medicine, Cornell University Medical College, New York City, Fifth edition, revised, 155 pages. W. B. Saunders Company, Philadelphia and London. Price, cloth, $1.50 net.

This small text now in its fifth edition has been accepted as a standard guide to prescription writing since its first printing in 1913. It has been designed primarily as a guide for students to prepare them in writing a grammatical and proper prescription to fill any need. The necessary Latin grammar is presented followed by tables of weights and measures, doses of drugs, vehicles, and incompatabilities, with appropriate sections devoted to the practical writing of prescriptions containing typical drugs of various groups commonly encountered in practice.

Since the book presents the metric system of prescription writing, the volume will be of use not only to the student but to the older practitioner who, having learned to prepare prescriptions by the apothecary system, may have queries or confusion in preparing prescriptions according to the newer method.

FRACTURES

By Paul B. Magnuson, M.D., associate professor of surgery, Northwestern University Medical School, Chicago. 317 illustrations. J. B. Lippincott Company, Philadelphia, Montreal and London, 1933. Price, $5.00.

The first treatment employed in a fracture case may determine not only the course of convalescence but also the degree of usefulness to which the injured member may be restored. For this reason it is of great importance that the general practitioner be familiar with the latest and most approved methods for the care of these injuries so that he may not only apply the correct treatment when the case is seen, but may also have a basis upon which to determine which cases should be referred to those specializing in orthopedic surgery.

This treatise is not a surgical treatise in the sense of the ordinary text upon operative orthopedics. It has been written primarily for the physician who sees and treats fractures without operative interference. The author, after having introduced the reader to the fundamentals of fracture treatment, discusses the anatomic mechanism and physical equipment required for the reduction of fractures, dealing specifically in succeeding chapters with fractures of the various parts. In the concluding chapters of the book he discusses physical therapy in the treatment of fractures and the type of exercise to be employed in these cases.

The volume is well written throughout and visualizes practical treatment by many well prepared photographic plates and schematic drawings.

MEDICAL CLINICS OF NORTH AMERICA

Volume xvi, Number 5. Baltimore Number, March 1933. Octavo of 257 pages with 16 illustrations. Per clinic year July 1932 to May 1933. W. B. Saunders Company, Philadelphia and London, 1933. Price, paper, $12.00; cloth, $16.00.

The articles in this number of the medical clinics are contributed by members of the profession in Baltimore. The volume contains papers on some of the more common diseases, notably, subacute bacterial endocarditis and chronic diarrheas. A particularly interesting article is a clinical presentation of six cases of coronary occlusion.

There also appears an article on the treatment of simple obesity. This subject is gradually claiming the attention of medical men.

Trigeminal neuralgia and Buerger's disease are also dealt with in an adequate manner.

Of the less common diseases there are good monographs on multiple myeloma and Rocky Mountain spotted fever, both of which disclose numerous points of interest.

To the reviewer, this number of the Clinics seems very much worth while. F. R. H.

THE MEDICAL CLINICS OF NORTH AMERICA

Volume xvi, No. 6, Mayo Clinic Number, May 1933. Octavo of 239 pages with 28 illustrations. Per clinic year, July 1932 to May 1933. W. B. Saunders Company, Philadelphia and London, 1933. Price, paper, $12.00; cloth, $16.00.

A number of instructive articles appear in this issue. One by Alvarez deserves special mention. It bears the somewhat unusual title, "Digestive Disturbances in Relatives of the Insane" and deals with the large number of mentally unsound persons who exhibit symptoms of abdominal disease but whose actual trouble is a subnormal or abnormal mental makeup. His depiction of the mistreatment and maltreatment that many of these afflicted persons receive at the hands of the medical profession, forms a rather pathetic picture. The article commends itself especially to the attention of the gastroenterologists and gynecologic surgeons.

Several years ago Axel Munthe, the Swedish physician who was trained under Charcot and later enjoyed a large Parisian practice made up largely of neurotic women, wrote a book of reminiscences, in one chapter of which he describes the vogue of colitis which had recently made its appearance as a new disease and which seemed to be afflicting the majority of the society women of the French metropolis. The vogue spread to this country and apparently has not entirely waned at this time, as Dr. Brown presents his conclusions in an article entitled, "Diagnosis and Treatment of Certain Types of Colitis and So-called Colitis." He quite properly restricts the term colitis "to those cases in which actual inflammation of the colon can be demonstrated by the roentgenogram or the sigmoidoscope." Other abdominal conditions of indefinite or obscure nature can no longer masquerade under the happy diagnostic "catch-all" of colitis. F. R. H.

MEDICAL CLINICS OF NORTH AMERICA

Volume xvii, No. 1. New York Number, July, 1933. Octavo of 324 pages with 64 illustrations. Per clinic year, July 1933 to May 1934. W. B. Saunders Company, Philadelphia and London, 1933. Price, paper, $12.00; cloth, $16.00 net.

Outstanding in this, the New York number of the Medical Clinics, are those clinics having to do with cardiovascular disease particularly that presenting the Stokes-Adams syndrome and a second dealing with the abdominal symptoms and coronary artery disease. A review of epidemic cerebrospinal meningitis in children, and pertussis and its treatment with gold tribromide, will be of particular interest to the pediatrician. Very helpful suggestions are offered in the clinic on extracardiac conditions simulating the anginal syndrome which will prove of diagnostic aid in this all too common disease. The

opening article in the volume on hypertrophic gastritis discusses this interesting condition very fully and furnishes several unusual photographs of the gross and microscopic pathology in this condition.

OBSTETRICS AND GYNECOLOGY

Volume II, by eighty leading specialists, edited by Arthur Hale Curtis, M.D., professor and head of the department of obstetrics and gynecology, Northwestern University Medical School; chief of the gynecologic service, Passavant Memorial Hospital, Chicago. Complete in three volumes and separate desk index, 3,500 pages with 1,664 illustrations, many in colors. W. B. Saunders Company, Philadelphia and London, 1933. Price, per set, $35.00.

Volume I of this outstanding and encyclopedic treatise upon the subject of obstetrics and gynecology dealt with the anatomy and physiology of the female pelvis, the embryo and fetus, the diagnosis and management of normal pregnancy and labor, and the pathology of pregnancy.

Volume II deals with the pathology of labor and of the puerperium, discussing also operative obstetrics, infectious processes of the uterus and adnexa, and tumors peculiar to these parts. It is impossible to adequately describe the material presented in any of these several volumes since in each instance the discussion presented has been prepared by an eminent authority and covers all of the useful and accepted observations in the particular field. The outstanding group of contributors assures its authoritativeness: its recent compilation brings the subject matter entirely up to date.

This set of books is unique in modern American medical literature, and will be of value to every physician dealing with those conditions observed in the broad fields of obstetrics and gynecology.

SURGICAL PATHOLOGY

By William Boyd, M.D., M.R.C.P. Ed., F.R.C.P. Lond., Dipl. Psych., F.R.C.S., Professor of Pathology, University of Manitoba; Pathologist to the Winnipeg General Hospital, Winnipeg, Canada. Third edition, thoroughly revised. 866 pages with 477 illustrations and 13 colored plates. W. B. Saunders Company, Philadelphia and London, 1933. Cloth, $10.00 net.

Since the first edition of this book appeared in 1925, it has maintained its enviable position as one of the most outstanding pathologic treatises of surgical conditions. In the present revision many sections have been expanded and new material added, bringing the subject entirely up to date. The general formation of the book has remained unchanged, although many new conditions are discussed and some others elaborated upon at greater length. Beginning with the general subjects of inflammation and repair, the author discusses tuberculosis, syphilis, shock, tumors and the special pathology of the various organs and systems, concluding his valuable treatise with a most worthwhile chapter entitled "The Surgeon and the Laboratory."

The volume is well illustrated with many photomicrographs and gross specimen photographs, which have not heretofore appeared in the literature. No surgeon's library can be considered up to date or adequate without this valuable text.

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS

Neurology—Edited by Peter Bassoe, M.D., Clinical Professor of Neurology, Rush Medical College of the University of Chicago.

Psychiatry — Edited by Franklin G. Ebaugh, A.B., M.D., Director, University of Colorado Psychopathic Hospital; Professor of Psychiatry, University of Colorado School of Medicine. 1932 series. The Year Book Publishers, Inc., 304 South Dearborn Street, Chicago, Ill.

Both authors are well known as teachers, authorities and writers in their respective fields. The present edition adequately covers the recent literature on neurology and psychiatry in the past year. The edition maintains the high standards set by the year books of The Practical Medicine Series of the past. D. M. B.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA

Third Series, fifty-fourth volume. Containing the papers read before the College from January, 1932, to December, 1932, inclusive. Edited by Walter G. Elmer, M.D. Published for the College by Dornan, Philadelphia, 1932.

This publication presents the papers read before a medical society which was one hundred and forty-six years old in 1932. After giving the roster of membership there are several memorials of deceased members, notably Dercum, Hare, Deaver and Mills. Incidentally, these men were the Olympians in the school days of the reviewer and were names to conjure with in the medical world of the day. The articles which follow cover the usual wide range of medical topics and are, for the most part, of high calibre.

A rather unusual paper by Tait McKenzie on "Facial Expression of the Emotions" accompanied by reproductions of masks made by the author, illustrates the power of this gifted medical man in the realm of sculpture.

The book is well printed on a good quality of paper and is well bound. F. R. H.

The JOURNAL
of the
Iowa State Medical Society

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TUBERCULOSIS IN OCULAR DISEASE*

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That tuberculosis is an occasional cause of ocular disease is not so generally appreciated by the profession as it should be. Because of this fact I have selected this subject for discussion.

It is now well established that tuberculosis may involve any portion of the eye or its adnexa. Microscopic sections of enucleated eyes showing characteristic tuberculous changes have proved this beyond a doubt. Typical ocular tubercles have been produced by numerous investigators after tubercle bacilli have been injected into the blood stream of laboratory animals. The eye is so favorable a site for the development of tuberculosis that Friedreich and Noske as early as 1898 suggested using the eye of laboratory animals as a site in which to study the development and course of tuberculous processes during life, after the injection of tubercle bacilli into the general circulation. They used rabbits in their investigations and watched the formation and resolution of caseous tubercles in the iris. Baumgarten proposed inoculating bits of suspected tuberculous material into the eye of the rabbit for diagnostic purposes, stating that the anterior chamber made a favorable site for the development of tubercles, because they could be seen with the naked eye at an early stage. Cohnheim also mentioned the anterior chamber as a favorable site for the implantation of suspected tuberculous material. This method of diagnostic procedure has been abandoned for the later and more practical technic of injection into the peritoneal cavity of guinea pigs. However, it proved to early investigators that the eye was a favorable site for the development of tuberculosis.

The eye with its intricate network of large and small vessels in the uveal tract, forms an ideal location for the lodging of small emboli and for this reason is a favorite site for the establishment of secondary foci of infection. The literature is replete with case reports of uveitis and other forms of eye inflammation from foci of infection, originating in the tonsils, teeth, prostate and other organs. In a similar manner a tuberculous area in any portion of the body may act as a focal point from which tubercle bacilli may emanate and eventually be carried to the eye, establishing a tuberculous inflammation in that organ.

From the foregoing it becomes clear that tuberculosis may occur in the eye just as it may appear in the brain, a bone or a joint. This is a point that is frequently overlooked by the medical man who often ridicules the diagnosis of ocular tuberculosis. The layman always is amazed when informed of such a diagnosis.

This skepticism seems justified since tuberculous eye lesions frequently occur in persons who seem to be in perfect health, but who have a mild or latent form of tuberculosis. This is especially true if after a thorough physical examination no physical signs of tuberculosis can be found by percussion or with the stethoscope.

In every case in which ocular tuberculosis is suspected the examiner must go further before ruling out tuberculosis, and employ the x-ray in addition to the intelligent use of tuberculin for diagnostic purposes.

It is a well known fact that tuberculosis exists either in an active or latent form in a high percentage of our adult urban population. Either of these types may act as the primary seat from which tubercle bacilli may migrate and eventually reach the eye. It is obvious that the extension from the primary seat to the eye must be through the blood stream and that the new disease in the eye is a secondary tuberculosis, subjected to the modifying influences of allergy, immunity, or any other state created by the primary tuberculosis.

There is sufficient scientific evidence to conclude that minute tuberculous foci may become inactive but still harbor living tubercle bacilli that may proliferate and produce tuberculosis when placed under favorable conditions. While bacilli

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can rarely be demonstrated microscopically in caseated tubercles, the injection of caseous material into susceptible animals usually produces active tuberculosis. Metchnikoff found bacilli in a dormant state in fibrous nodules that were several years old. Opie and his co-workers were able to grow tubercle bacilli from material obtained after crushing calcified lymph glands that had cast a definite shadow on x-ray plates. A deposit of calcium sufficient to cast a shadow may be present in one portion of a tuberculous nodule in which there is activity and living bacilli, and be a site from which extension may occur. It is from lesions of this type that emboli of tubercle bacilli may have their origin and extend to the eye; and one is not justified in stating that tuberculosis is not present in an individual with a suspicious ocular history, until a critical search for x-ray evidences of childhood tuberculosis has been exhausted. This point cannot be over-emphasized in connection with the study of suspicious ocular disease. Cases illustrating this point could be cited if time would permit.

Shadows of calcified lymph nodes in the region of the hilus, isolated nodes in the periphery of the lung, intralobar thickening and irregular markings in the contour of the diaphragm, are evidences of childhood tuberculosis and represent possible sites of latent infection. If any of these changes are found, the data, while not confirming the diagnosis of ocular tuberculosis, have the same relative value as a positive blood Wassermann reaction in suspected syphilis.

Much has been said up to this point in an attempt to convince you that tuberculosis may manifest itself in the eye. The method of its spread to the eye has been alluded to and I have hinted at the type of primary lesions from which it may arise. It seems fitting now to discuss the procedure that should be followed in the event that tuberculous disease is suspected in the eye.

The general characteristics of tuberculosis of the eye, in its early stage, differ slightly with the part of the eye that is involved, but in general they are slight redness, swelling, a change in vision and the formation of isolated tubercles that tend to caseate. The nature of the ocular symptoms will be described in greater detail later.

Most cases of ocular tuberculosis are first seen by the ophthalmologist and it falls upon him to direct the search for the cause. If he suspects its nature, he should refer the patient to an internist to determine whether a focus of active or latent tuberculosis can be found in the body. The internist should be familiar with the lesions that are possible primary foci and should exert every effort to discover them. A complete and painstaking history is essential. The possibility of exposure to infection in infancy and childhood must be carefully investigated. This investigation should not be confined to the immediate members of the family, but should also include an inquiry into the health of household servants, governess, nurses, and relatives with whom the subject may have come in contact during infancy and childhood. A complete medical history of the patient is also essential.

A record of the temperature, taken at four hour intervals should be kept over a period of a week and a complete physical examination for evidences of tuberculosis should be made. As has been mentioned repeatedly, careful roentgenologic investigation should be included. This should be conducted by one who is capable of obtaining satisfactory roentgenograms of the chest and who is familiar with the modern conception of the x-ray findings in latent as well as active tuberculosis.

After the foregoing evidence is accumulated, the internist and ophthalmologist should determine whether it would be advisable and safe to employ tuberculin for diagnostic purposes. If the internist concludes that the administration of tuberculin will not excite existing lesions into renewed activity, the ophthalmologist should suggest the size of the dose that would be safe and not produce a dangerous reaction in the eye. It is obvious that tuberculin should either be used with great caution or not employed in the presence of active lesions in the chest or in the presence of an active ocular lesion in which a reaction would impair the vision.

Three types of diagnostic reactions may occur: a local, at the site of injection; a constitutional; or a focal reaction at the site of tuberculous lesions especially in the eye. Each type of reaction is to be looked for and evaluated if it appears.

Only two of the diagnostic tuberculin tests are of value in suspected ocular tuberculosis. They are the intradermal or Mantoux test, and the subcutaneous inoculation test. Old tuberculin should be used for both tests. The Mantoux test is fraught with less danger than the subcutaneous test because the reaction is more likely to be confined to the site of injection, while in the subcutaneous test, the large doses of tuberculin increase the danger of constitutional, and undesirable focal reactions in the eye. The Von Pirquet test is of value in children under five years of age, and the Calmette or conjunctival test should never be employed because of the great danger of a severe or even destructive focal reaction which may occur in an eye that is involved in a tuberculous process.

The Mantoux test affords a graduated means of

determining whether the individual reacts, or is sensitive to tuberculin. The test is done as follows: 0.1 c.c. of a 0.5 per cent phenol saline solution of old tuberculin is diluted so that it contains 0.001 mg. and is injected into the skin where it makes a small wheal about the size of a dime. In positive cases a reaction occurs around the site of injection in from 48 to 72 hours. If no reaction occurs a second test with a stronger dilution that contains 0.01 mg. of old tuberculin to 0.1 c.c. of phenol saline solution should be used in the opposite arm, and the site of injection observed from 72 to 96 hours. If no reaction appears a third intracutaneous injection should be made with a stronger solution that contains 0.1 mg. of old tuberculin to 0.1 c.c. of the above mentioned salt solution. I am sure that most of you are familiar with this technic and further elaboration of the method of dilution and administration is not necessary. These details may be found in any modern book on laboratory methods. The severity of the reaction may be divided into four groups from plus one to plus four. While focal reactions are unlikely to occur in the eye with the intradermal tests the eye should be watched, and if reactions do occur in the eye, they should be considered as diagnostic proof that the ocular process is tuberculous. While a frank local reaction to tuberculin at the site of the injection does not prove that the ocular lesion is tuberculous, it adds weighty evidence in favor of such an etiology.

The subcutaneous method is attended with greater danger and should not be employed in most forms of ocular disease. It has been stated above that general and focal reactions are more frequent when this method is employed. It should be avoided in all cases of suspected tuberculosis of the retinal vessels and certain forms of corneal and uveal disease because of the great danger of irreparable damage that may follow a reaction in the eye. Many students of ocular tuberculosis believe that focal reactions should always be regarded as extremely dangerous and should always be avoided. Wilmer of Johns Hopkins has written extensively on this point and reports a specific case in which the vision was lost after a focal reaction to tuberculin. Since the true nature of reactions to tuberculin is not clearly understood, nor in conformity with the opinion of any single school, one cannot say with certainty whether the reactions encountered are due to specific allergic phenomena to a given antigen, or whether other factors enter into the process. One can find enthusiasts for any one of a number of theories, all of which seem to have convincing experimental evidence in their favor. Regardless of our convictions on the nature of reactions following the employment of tuberculin, we must conclude that a positive focal reaction in the eye almost certainly proves that the ocular lesion is tuberculous. A constitutional reaction manifested by malaise and elevation of temperature shows that the individual is allergic to tuberculin, and a frank local reaction at the site of the injection proves that the individual has been exposed to previous tuberculous infection and has been sensitized to the products of the tubercle bacilli and rendered allergic to tuberculin. These tests are valuable in those cases where a latent tuberculosis is present, but cannot be demonstrated by physical or x-ray findings. The degree of reaction gives further valuable data in determining the advisability of employing tuberculin in treatment.

Tuberculosis affects the eyes in any one of three ways: 1. By tubercle bacilli invading the ocular tissues with the production of true ocular tubercles or a diffuse tuberculous inflammation. 2. Through the action on the eye of irritating materials that originate in distant tuberculous areas in the body (allergic tuberculous inflammation in the eyes such as phlyctenulosis, scrofulous keratitis and transient circumcorneal or conjunctival congestion without inflammatory exudates). 3. Asthenopia from the general weakness associated with tuberculosis.

The true tuberculous lesions of the eye belong in the first group, that is, those lesions which follow the accidental inoculation of the eye with tubercle bacilli from a primary focus in some portion of the body. This form, as has been stated earlier in the paper, is always secondary and of hemotogenous origin. The ocular infection occurs at a time when a shower of small emboli of tubercle bacilli are released from a primary tuberculous focus in some portion of the body, and accidentally lodge in the eye where they multiply and produce one or more tubercles. The embolic theory was proposed by Renke who insists that a bacteremia does not occur. Meisner, Werdenberg, Loewenstein and the Vienna school, on the other hand claim that the spread takes place at a time when bacilli are present in the blood stream in the form of a bacteremia, and that in many cases of ocular tuberculosis, tubercle bacilli may be cultivated from the blood of such patients. Corper of the National Jewish Hospital for Consumptives in Denver, and other research workers claim that Loewenstein's conclusions are faulty and insist that all extensions from the primary to the secondary site are embolic.

In 1921 Corper and I conducted a series of experiments in rabbits by injecting suspensions of living and dead tubercle bacilli into the internal

carotid artery of living animals. When we used a finely ground suspension of bacilli in normal salt solution that would be comparable to the suspensions that are present in the blood stream in a tuberculous bacteremia, we found that tubercles did not develop in the eye, the bacilli passing through the ocular capillaries without interruption. However, after injecting a suspension that contained clumps of tubercle bacilli corresponding to bacterial emboli that occasionally appear in the blood stream, ocular tuberculosis occurred in a high percentage of the animals. These experiments confirmed the embolic theory. These tests also disclosed the fact that the intensity of the ocular infection varied with the concentration of the suspension that was injected, and that the number of lesions in the eye were greater with the higher concentrations. Other factors such as allergy, immunity and virulence of the bacilli also played a part in the severity of the ocular reaction. These experiments throw valuable light on the nature of tuberculous lesions in the eyes of human beings that fall under the first group.

A discussion of the nature of tuberculosis when it affects the eye will not be amiss at this time. The uveal or vascular coat of the eye is the most frequent site of metastatic infection. Tuberculosis of the uveal tract occurs at all ages and affects both sexes. However, it is usually seen in the young. Cases have been reported in infancy, and O'Gilvy described a case of tuberculosis of the iris that was verified histologically in a man seventy-two years of age. In thirty-two collected cases of tuberculosis of the iris, Hill-Griffith found the average age of onset to be twelve years; the youngest of his cases was four months old and the oldest fifty-two years of age. Pechin stated that tuberculosis of the iris was most frequently encountered between the ages of five and twenty-five years. The greatest number, however, occurs between the fifth and thirtieth years of life. In reviewing the literature one finds that the female sex is more frequently affected than the male. The percentages of various authors on this point differ so widely that the figures are of little value.

In general, statistics on the frequency with which both eyes are invaded vary, but in the acute miliary form both eyes are almost invariably affected. This is also true of the more chronic disseminated forms of chorioretinitis. In diffuse and miliary iritis and choroiditis of the subacute type both eyes are usually involved, but in solitary tubercles of the choroid the activity is generally found in only one eye. There are cases in which the disease remains confined to one eye for many years, but later attacks the other.

The active process in the eye may subside and heal leaving only a scar surrounded by pigment as a record of the former disease. In other cases the eye may improve and remain quiet for a short period of time only to burst into new activity at a later date. Repeated relapses are common and as long as the patient lives there is danger of recurrence of the disease.

The symptoms of tuberculosis of the uveal tract vary with the portion of the eye that is affected. It may be divided roughly into anterior and posterior forms. In anterior uveitis the disease involves the iris and ciliary body, although it may spread to other parts later. One often finds, however, that the severity of the process is greater in one portion of the uveal tract than in the others.

It is not the purpose of this paper to describe the minute appearance of ocular lesions. It is sufficient to state that any portion of the eye may be invaded, and that the appearance and symptoms differ with the part of the eye that is involved.

With the exception of the acute miliary type these forms of tuberculosis of the eye are usually seen in cases of latent tuberculosis. The victims as a rule have the appearance of healthy individuals and many of them seem to be in robust health.

Tuberculosis of the eye is rare in cases of active pulmonary tuberculosis. This fact was mentioned earlier in the paper but needs additional emphasis because it has led to misunderstanding on the part of competent internists as well as ophthalmologists.

In a recently published paper, Goldenburg and Fabricant reported their findings in the eyes of 1,073 cases of proved active tuberculosis and came to the erroneous conclusion that tuberculosis of the eye is much less frequently encountered than the literature would have one believe. Derby, Bedell, and Verhoeff in discussing their paper pointed out that in the majority of cases of chronic ocular tuberculosis, the internist finds no evidence of systemic tuberculosis. Verhoeff stated further, that he had found evidence of tuberculosis microscopically in eyes that had been enucleated, after the internists had found no evidence of tuberculosis elsewhere in the body. My experience parallels that of Verhoeff, for I have examined several eyes microscopically and found unmistakable evidence of intra-ocular tuberculosis, when internists had pronounced the persons from whom the eye had been removed, free from the disease. Axenfeld taught that ocular tuberculosis developed in persons with tuberculous bronchial glands, but rarely occurred in persons with active pulmonary tuberculosis. At the present time this fact is almost universally conceded by those who have studied the subject critically.

At least 75 per cent of the cases of ocular tuberculosis that have come under my observation have occurred in robust individuals, but after a painstaking search, which included the various refinements in the diagnosis, a latent primary focus was demonstrated in a large majority of the cases.

In the second group of eye affections that occur in tuberculous subjects one does not find tubercle bacilli or other microscopic evidence of tuberculosis in the affected part. Phlyctenular keratoconjunctivitis is an example. For many years this condition has been thought to be associated with tuberculosis, especially when it occurred in children. Fifteen years ago Gibson reported his findings of a study of the sensitivity to tuberculin in large series of children with phlyctenular disease. He found that 85 per cent of the cases gave unmistakable positive reactions following its use. Other investigators have confirmed his findings. However, patients with phlyctenular keratoconjunctivitis have been found equally sensitive to other antigens so that tuberculosis cannot be ascribed as the sole cause. Nevertheless, it seems probable that in the majority of cases, recurrent phlyctenules of the cornea and conjunctiva are a manifestation of hypersensitivity to a tuberculoprotein, that is either liberated in the tears or present in the blood stream. This is especially true in cases that show other manifestations of a scrofulous diathesis.

Certain forms of interstitial keratitis fall under this group and are probably due to hypersensitivity to tuberculoprotein.

One occasionally sees tuberculous patients in whom transitory congestion of the conjunctival and circumcorneal vessels with moderate edema occurs without other signs of ocular inflammation. The transient nature of these conditions with complete recovery suggests their allergic character. It is my impression that these symptoms occur in patients with active pulmonary tuberculosis during periods of increased toxicity and that the ocular symptoms disappear rapidly with improvement in their general condition.

A third group of tuberculous patients complain of great ocular distress and fatigue with the slightest use of the eyes. The asthenopic symptoms are frequently much more severe than one would expect to find with slight errors of refraction. Yet these symptoms are often markedly relieved after lenses have been prescribed and proper instruction given in regard to correct lighting conditions and posture during reading and writing. These cases should be refracted critically and minute errors of refraction corrected.

I have attempted thus far to cover the effect that tuberculosis may have on the eye and to describe briefly the ocular manifestations that one may encounter in tuberculous subjects.

The discussion would not be complete unless some reference to treatment were made. It is obvious that it becomes necessary first to establish the diagnosis of the ocular condition and then to begin local treatment at the earliest possible moment. This should be delegated to the ophthalmologist and will not be enlarged upon.

Rest and general hygiene are extremely important in raising the patient's resistance. The regimen to be followed should be specific and rigid observation by the patient insisted upon. Because of the patient's sense of well being it is extremely difficult, in many cases, to obtain the necessary cooperation on the part of the patient in this respect.

Most ophthalmologists agree that tuberculin is a valuable therapeutic agent in certain forms of ocular tuberculosis, and the literature on this phase of treatment is voluminous. It must be admitted that many of the favorable reports are founded on clinical impressions and are not very convincing when analyzed critically in the light of our modern theories of allergy and immunity.

However, the eye is a favorable site in which to observe the minute changes that take place in small lesions. This is especially true in the small circumscribed areas that characterize the lesions of ocular tuberculosis. These lesions are usually few in number and not massive, and when present in a case with only a few, small, isolated foci of tuberculosis in other parts of the body that are quiescent, form an ideal group of circumstances from which to expect favorable results after the therapeutic use of tuberculin.

Under these conditions small doses of tuberculin influence the ocular lesions favorably in many cases, and differ greatly from the cases of active tuberculosis in other parts of the body, where massive lesions in all states of development are present and in which minute reactions cannot be detected. In the latter condition great harm can be done, while in the eye the dose can be accurately regulated.

After deciding whether tuberculin can be used without stimulating latent foci into activity one must determine the type and dose of the tuberculin which is best suited for the case.

Two schools have developed around the method of using tuberculin for therapeutic purposes in ocular tuberculosis. One holds that the aim should be to obtain a very slight evanescent reaction in the ocular lesion after the administration of each dose and thus stimulate the formation

of fibrous tissue and encapsulation of the lesion in addition to stimulating body resistance and fixing of the tubercle bacilli. This school has been most popular in the past, but is gradually losing ground to a second group who holds that the favorable results from the use of tuberculin depend on a desensitization to tuberculoprotein, thus eliminating the harmful reactions that occur in the allergic state. Both schools agree that severe focal reactions are harmful and to be avoided. It is certain that tuberculin is harmful in highly allergic individuals and should either be used with great caution under expert supervision or abandoned entirely. I have the impression that a large number of ophthalmologists look upon tuberculin as a specific in ocular tuberculosis. This is an erroneous conception. It is only an aid in treatment and if not used intelligently it may do much harm.

Woods, and the Baltimore group, following the teachings of Rich and McCordock, insist on keeping the dose of tuberculin below the reacting point. They used a standardized Denys bouillon filtrate, giving injections every four days providing there is no evidence of local or focal ocular reaction. Many prefer Bacillen emulsion (B. E.) and others adhere to one of the many forms of tuberculin which have been proposed in the past.

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CHRONIC DIARRHEA—ITS DIFFERENTIAL DIAGNOSIS*

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Chronic diarrhea is one of the most perplexing problems with which a gastro-enterologist has to deal. The causes are so numerous and so diverse that the differential diagnosis is a most complex one. The purpose of this paper is to offer a simplified method of approach, by listing the causes from an anatomic standpoint, with a brief account of the pertinent facts in the history, and by discussing briefly the aids to diagnosis.

CAUSES

I. *Stomach.*

Diarrhea of gastric origin is spoken of as "gastrogenous diarrhea." It is on a mechanical basis. The stomach empties rapidly, as shown by fractional gastric analysis or x-ray. Food improperly prepared is irritating to the intestines. The frequency of stools is more noticeable in the morning, and after meals. The diarrhea tends to occur intermittently.

A. *Achylia Gastrica:* Gastric analysis reveals no free hydrochloric acid, even after the administration of histamine. The total acidity is less than twenty, and there are no ferments. It occurs especially in pernicious anemia, but is also found in some cases of posterolateral sclerosis (ataxic paraplegia). Some of these patients later develop pernicious anemia. Chronic catarrhal gastritis, and syphilis of the stomach are sometimes accompanied by achylia. Finally, there is the idiopathic achylia, present in 1.2 per cent of all test meals taken at random.

B. *Achlorhydria:* There is no free hydrochloric acid in the gastric juice, but there is a moderate total acidity, and ferments are present. It is found in 10 per cent of routine gastric analyses (idiopathic; symptomless). Among the causative diseases, achlorhydria is most commonly found in carcinoma of the stomach. In the early diagnosis of this disease (carcinoma), the x-ray has largely supplanted gastric analysis, but the latter is still of value in the doubtful case. Other causes of achlorhydria are arteriosclerosis, syphilis, diabetes, and tuberculosis.

C. *Gastro-enterostomy:* After an operation for ulcer, the occasional jejunal inflammation that follows (high free acid, and incompletely prepared food from the stomach), either with or without marginal (gastrojejunal) or jejunal ulcer, sets up a chronic diarrhea. Gastrocolic fistula does likewise.

II. *Small Intestine.*

A. *Chronic Catarrhal Enteritis:* This is usually associated with gastritis. The diagnosis is made, as a rule, by exclusion. The causes are chronic passive congestion (as found in heart failure, cirrhosis of the liver, and nephritis), alcoholism, and overdosage with, or hypersensitivity to, arsenic or antimony.

B. *Tuberculous Ulceration of the Ileum:* There is a progressive diarrhea with the gradual appearance of little, if any, blood, and with occasional periods of constipation. The history is relatively short. Most cases are secondary to advanced pulmonary tuberculosis.

C. *Celiac Disease:* So-called "chronic intestinal indigestion" is especially common in children from the first to the fifth year. Constipation alternates with diarrhea. There is abdominal distention, malnutrition, and nervous symptoms. Some cases are the result of improper feeding, but the majority follow a prolonged attack of diarrhea or dysentery. The only characteristic pathologic change is dilatation of the small and large bowel, especially the latter. Recently, microscopic section has shown an atrophic process of the mucosa

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with partial disappearance of the epithelial lining of the glands in some areas, with replacement by connective tissue. In addition there was found round cell infiltration throughout the lower ileum.[1]

D. *Tuberculosis of the Mesenteric Lymph Nodes:* This is observed in children. There may be localized pain or tenderness, fever, or an abdominal mass. Fats are digested, but cannot be absorbed, due to obstruction of the lacteals, hence the presence of split fats in the stool.

E. *Sprue:* Although tropical sprue does not occur in this territory (obstruction to the lacteals occurs in the wall of the small bowel by invasion by embryonic cells of the vessel-bearing connective tissue), there is occasionally seen a sprue-type of diarrhea, with extreme illness, marked anemia, and stomatitis.

III. *Colon.*

A. *Chronic Ulcerative Colitis:* The history, usually dating back several months, is one of recurrent attacks of bloody, purulent, rectal discharges, with day and night frequency about equal, with gradual, progressive depletion, and finally chronic invalidism. Fever and leukocytosis are often present, and a diplostreptococcus has been found in culture from the rectal lesions by Bargen in 80 per cent of the cases.[2]

B. *Dysentery:* Severe, recurrent attacks of diarrhea, with or without blood, with a tendency to more stools in the daytime than at night, and periods of complete remission, suggest parasitic disease. Amebic dysentery is endemic in the south, but many cases of the chronic variety have been found in the mid-west. The bacillary form of dysentery is more likely to occur in epidemics. The acute attack, if not treated properly, may lead to a chronic form of the disease, lasting for months or years. The patient constantly passes loose stools containing small amounts of mucus. The disease either slowly disappears, or the patient dies from exhaustion.

C. *Carcinoma:* In rectosigmoid carcinoma, primary constipation is followed weeks or months later by urgency and frequency of rectal discharge, streaked with blood. Weight loss and progressive failure are noticed, but these may be late signs. Carcinoma of the right half of the colon usually causes anemia and other constitutional symptoms early, whereas carcinoma of the left half may not show evidence of its presence until partial or complete obstruction is produced (because of the smaller caliber of the bowel on this side, and because the stools are more formed by the time they reach this portion of the colon). To diagnose the early case, any recent change in bowel habits of patients in the cancer age should be systematically investigated.

D. *Tuberculosis:* The favorite site is the ileocecal coil, but the entire colon, including the rectum, may be involved. In addition to the ulcerative variety, mentioned under the small intestine, there occurs a less common type known as hyperplastic intestinal tuberculosis. This involves the cecum especially. There is a proliferation of tissue which causes a growth grossly similar to carcinoma. It occurs in young people. Pain is a prominent symptom, and many cases have been operated upon with a mistaken diagnosis of appendicitis. It is not found in cases of advanced pulmonary tuberculosis. X-rays often show an old, healed apical tuberculosis.

E. *Diverticulitis:* Most cases occur in patients, more than forty years of age. Infection develops in an underlying diverticulosis. Obesity and constipation are often contributing factors. With obstruction there may be a mass in the left lower quadrant, with fever and leukocytosis. Urgency and frequency of stools often develop. This is the so-called "left-sided appendicitis."[3]

F. *Mucous Colitis:* This is the "Myxoneurosis intestinalis" of Europe. It is not a true colitis but a simple hyperproduction of mucus on a neurogenic basis. There is an underlying constipation. The appearance of colic, then passage of nothing but mucus, with relief of the pain, is typical of the condition. There is emotional and nervous instability. The process tends to recur under stress. There may be an allergic factor, but recent studies have cast some doubt on this.[4]

G. *Protozoal Infestation:* In addition to the ameba of dysentery, there are protozoa which less frequently give rise to chronic diarrhea. The Balantidium coli, ciliated, and with a large kidney shaped nucleus, causes ulceration of the colon. It is derived from pigs. It is much more common in Europe. Giardia lamblia, a flagellate, when present in the colon, causes a chronic type of diarrhea. The more common form, however, is an acute enteritis with a profuse watery diarrhea. The organisms are found in the duodenal contents and bile. Then there is the Trichomonas intestinalis, also a flagellate, which is probably by itself not pathogenic, but when found in the stools of a dysentery patient makes the prognosis worse.[5]

H. *Syphilis:* Syphilis of the intestine may, in its clinical aspects, resemble tuberculous enteritis or carcinoma. Although gummata may form in the intestinal wall, the more common site is in the rectum. Gummata in the rectal wall break down to form ulcers. These, in turn, cause stenosis on healing. Syphilitic strictures of the rectum are not

so common as was thought a few years ago. The majority of benign, inflammatory rectal strictures have been shown to be due to the gonococcus.[6]

I. *Colitis Secondary to Constipation:* Chronic irritation of the rectum and sigmoid in elderly people from the presence of, and decomposition of, hard feces in a case of dyschesia (rectal constipation), results in proctosigmoiditis. The rectum is only partially emptied when the bowels move. The taking of strong laxatives over a long period of time sets up a similar inflammation.

J. *Colitis Due to Chemical Irritants:* Alcohol, arsenic or mercury taken over long periods, or by hypersensitive persons, often cause chronic diarrhea. The colitis is only one part of the more generalized picture.

K. *The Dyspepsias:* This group is more commonly recognized in the European clinics. It probably accounts for many of our unexplained diarrheas in older people. There is difficulty in digesting carbohydrates in some cases, proteins in others, and fats in still others. There is an excess of muscle fibers, starch granules, or fat droplets, respectively, in the stools, but no products of inflammation. If this is suspected, a known standard diet, such as Schmidt's, should be given for a few days before a microscopic study of the stool is made. The fermentative dyspepsia is the most important group. Cellulose causes trouble, in addition to the ordinary carbohydrates. Fatty dyspepsia (in the absence of demonstrable gallbladder or pancreatic disease) is the least common.[7]

IV. *Gallbladder and Pancreas.*

With chronic cholecystitis, there is difficulty in handling fats, with often a resultant "fatty" diarrhea. Chronic pancreatitis is often associated with gallbladder disease, and explains why many patients fail to do well after cholecystectomy.

V. *Constitutional Disorders.*

Persistent diarrhea develops in about three-fourths of the cases of pellagra. Stools are frequent and watery, but there is nothing characteristic about them. Attacks of vomiting and diarrhea occur in the course of hyperthyroidism. They are known as "thyroid crises."

VI. *Nervous System.*

A. *Tabes Dorsalis:* Diarrhea occurs in the so-called "rectal crises," analogous to the vomiting spells of the "gastric crises." In the later stages, diarrhea is due to sphincter paralysis.

B. *Emotional Diarrhea:* The diarrhea occurs after meals or on excitement. The patient has an "irritable colon," and only a slight stimulus is needed to upset the normal balance and cause the passage of frequent, loose stools.

C. *Reflex:* Almost any painful disease of the lower abdomen may reflexly increase intestinal peristalsis. Pelvic abscess is the best example.

VII. *Allergy.*

Allergic diarrhea is of the intermittent type. The nervous system is usually hypersensitive. Migraine, urticaria or hay fever are usually associated. It is sometimes noticed to follow the ingestion of milk, chocolate, clams, buckwheat, etc. Skin tests are not often helpful. The "elimination diets" of Rowe are worth trying in obscure cases, as diagnostic tests.

AIDS TO DIAGNOSIS

I. *Age of Patient.*

In youth, chronic diarrhea should suggest the possibilities of intestinal or mesenteric tuberculosis, dysentery, chronic ulcerative colitis, and intestinal parasites, as these conditions are more commonly encountered at this age period. In later life, gastrogenous (especially achylia) diarrhea, carcinoma of the colon, diverticulitis of the colon, and colitis secondary to constipation or laxatives, should suggest themselves as the more probable causes of chronic diarrhea.

II. *Sex.*

In males, carcinoma of the colon, diverticulitis of the colon, and achylia gastrica are more frequent. A majority of the cases of mucous colitis, emotional diarrhea and colitis secondary to constipation or laxatives occur in females.

III. *Pain.*

Most diarrheas of gastric origin are painless. When pain is present in a case of chronic diarrhea it suggests the colon as the site of disease. Epigastric distress is common in disease of the colon, but is associated with peristalsis rather than directly with the taking of food. This is an important differential sign from the epigastric pain of gastric lesions, which have a direct relationship to food intake. Severe cramps anywhere in the abdomen or along the line of the colon, straining and urgency, suggest inflammatory, ulcerative disease. Localized, obstructive cramps are often associated with carcinoma. The distress of diverticulosis occurs along the line of the colon as mild twinges of pain. It suggests that of "irritable colon" due to other causes. The attack of diverticulitis often simulates that of acute appendicitis, but on the left side. It sometimes resembles large bowel obstruction due to carcinoma. Mucous colitis causes colicky pain, followed by passage of small amounts of mucus, with relief of the pain. The pain is usu-

ally in the lower abdomen, and especially in the left lower quadrant.

IV. *Tenderness.*

Marked tenderness over the colon suggests colitis as the cause of the diarrhea (one of the various types of colitis). The cecum is tender in intestinal tuberculosis and amebic colitis. The descending colon is tender in chronic ulcerative colitis and diverticulitis.

V. *Stool Examination.*

A. *Gross:* A large, glistening, fatty stool is found in pancreatic disease, mesenteric tuberculosis, celiac disease, and sprue. In achylia, the stools are mushy, with an excess of macroscopic food. Blood and pus in the stool indicate organic disease of the colon. Blood is most marked in chronic ulcerative colitis. It also occurs in carcinoma and amebic colitis. It is occasionally seen in diverticulitis, and does not signify that carcinoma has developed, as was formerly thought. The blood that appears in a case of intestinal tuberculosis is dark, as it has come from a distance.

Pus is most marked in chronic ulcerative colitis and carcinoma. It is also prominent in bacillary dysentery, tuberculosis and diverticulitis.

Mucus occurs with blood and pus in organic colitis and carcinoma. Without blood and pus it appears in mucous colitis, catarrhal entero-colitis, and in some cases of tuberculosis.

B. *Microscopic:* Search for parasites and ova, especially in the presence of eosinophilia. For amebae, it is necessary to examine a warm, fresh stool. Have the patient pass the stool in the office, into a basin containing warm saline. In this way the motility of the amebae will be preserved. The presence of blood, pus and mucus may be detected when not visible grossly. The microscopic appearance of a bacillary dysentery stool is different from that of any other disease. There is an abundant cellular exudate, very rich in polymorphonuclear leukocytes, with variable quantities of red blood cells, and always a certain proportion of large cells, some of which are large mononuclears while others are macrophages. These latter are characteristic of the disease. They are very large and sometimes contain ingested red blood cells, and are then often mistaken for dead amebae. The pus cells undergo a toxic necrosis and lose their nuclei, leaving the so-called "ghost cell."[8]

Undigested food of all kinds, but especially connective tissue and muscle fibers, are found in achylia. Connective tissue cannot be digested in the absence of hydrochloric acid. Undigested muscle fibers are also prominent in putrefactive dyspepsia. Undigested starch granules and cellulose are abundant in fermentative dyspepsia. Excessive neutral fat and muscle fibers are found in pancreatitis. Neutral fat is also abundant in fatty dyspepsia. Excessive split fats occur in catarrhal enteritis, mesenteric tuberculosis, and sprue. The difficulty here is with absorption of fats, hence the appearance of split fats in the stool. The difficulty in the former group is with the digestion of fats, hence neutral fat in the stool.

Nile blue sulphate (National Aniline and Chemical Co.) demonstrates neutral fat. Neutral fat is stained red, while split fats and other ingredients are colored blue. Place a large drop of the dye (Nile blue sulphate O.IG; glacial acetic acid 1.0 c.c.; distilled water 100 c.c.) on a slide, and touch this with a tiny drop of stool on the end of a needle. Use a cover-glass and examine with the microscope.[9]

The acid fast stain is used for the Bacillus tuberculosis, and culture will reveal the dysentery bacillus. The presence of the tubercle bacillus in the stool does not prove the presence of intestinal tuberculosis, as acid-fast bacilli were found in the stools of 90 per cent of patients with pulmonary tuberculosis, of whom only five to ten per cent had intestinal lesions. The bacilli are swallowed and usually pass through without doing any harm. Furthermore, other organisms, such as the smegma bacillus and various saprophytes, may take the acid-fast stain.[10]

VI. *Sigmoidoscopy.*

The lesions are within reach of the sigmoidoscope in the most common pathologic types of chronic diarrhea. Sigmoidoscopy affords an opportunity for direct inspection of the lesion, for biopsy, and for the making of smears and cultures direct from the lesions. If an obstructive lesion can be accurately visualized by the sigmoidoscope, it is unnecessary to x-ray the colon, thereby eliminating the possibility of barium getting above the obstruction and superimposing an acute obstruction on top of a chronic process.

A. *Chronic Ulcerative Colitis:* This disease starts in the rectosigmoid region and spreads proximally, hence the severest reaction is visible through the sigmoidoscope. Buie was the first to recognize this. Multiple pin-head size ulcerations, without intervening areas of normal mucosa, give a characteristic and pathognomonic picture. The mucosa is covered with a film of blood, mucus and pus, and bleeds freely when touched with the instrument or swab. Streptococci are frequently recovered by smears or culture of material taken directly from the base of the ulcers. If examined early, miliary abscesses are seen. These later break down to form the ulcers mentioned above.[11]

B. *Chronic Amebic Colitis:* Although most of the involvement is in the proximal colon, the rectosigmoid is frequently the site of discrete, "buttonhole" ulcers having a "punched-out" appearance, and covered with a fleck of mucopus. The ulcers have a hyperemic zone at their margins. The intervening mucosa is normal. Material taken from the ulcers with a swab reveals active, vegetative forms of Endameba histolytica.

C. *Bacillary Dysentery:* The mucous membrane is hyperemic, with gray superficial necrosis. Edema is evident, and there is a profuse, moist, mucous exudate. Positive cultures are obtained with the aid of a swab. The two main groups are the Shiga bacillus and the bacillus of Flexner.

D. *Carcinoma:* The majority of colon malignancies are in the rectum or at the rectosigmoid junction. The lesion may not be visualized by x-ray, due to looping and overlapping of the pelvic colon, and the inability to straighten out the loops because they lie deep in the bony pelvis. The carcinoma appears typically as an irregular bleeding growth. It often has a cauliflower appearance. The lesion is always single, and the rest of the mucous membrane has a normal appearance.

E. *Mucous Colitis:* The mucosa has a glistening appearance due to excess of mucus. There may be long mucous shreds. Removed by swab and examined microscopically, the mucus will be found to be free from pus and fibrin, and bacteria are few in number.

F. *Melanosis Coli:* In addition to the protosigmoiditis caused by some cases of chronic constipation, the use of strong laxatives, such as cascara, aloin, and rhubarb, over a long period, have been shown to cause melanotic pigmentation of the colon. The typical sigmoidoscopic picture has been recently well described by Bockus and his coworkers. The mucosa is brown or black, with a fine network of yellow or light brown polyhedral design running through it. The author has seen two of Bockus' cases. Both were due to cascara.[12]

G. *Ulcerative Tuberculosis:* Irregular, shaggy, deep ulcers, with undermined and overhanging edges, are separated by intervening areas of normal mucosa. The rectal valves are often involved.

VII. *Barium Enema.*

This is essential to rule out organic disease beyond the reach of the sigmoidoscope, and to determine the extent of lesions discovered by sigmoidoscopy. The enema is much more satisfactory than the mouth meal for this purpose.

A. *Chronic Ulcerative Colitis:* Filling of the entire colon takes place very rapidly. The course of the colon is straight, and the flexures are approximately right angles. The inflammatory process involves not only the mucosa but also all the coats of the intestinal wall, so that the lumen is narrowed and all haustrations are lost. The appearance of the colon has been described as that of a "lead pipe." There may be one or more strictures. The greatest involvement is on the left side of the colon, and the process often does not go beyond the splenic flexure. In an advanced case the appearance is pathognomonic. The disease process, in about 20 per cent of the cases, is limited to the rectum, hence the importance of carefully watching the filling of the rectum, and also the importance of sigmoidoscopy.

B. *Amebic Colitis:* The roentgenologic appearance is not often characteristic. There are signs of irritability and spasticity in the involved area. In some cases, however, a positive diagnosis can be made by x-ray. The lesions characteristically involve the right side of the colon, and the picture bears some resemblance to that produced by chronic ulcerative colitis, but less extensive.

C. *Carcinoma:* Encroachment on the lumen of the bowel by the tumor causes the characteristic "filling defect" of carcinoma. Occasionally complete obstruction to the barium enema is encountered, but usually there is definite canalization, with a rough, jagged contour to its margins. In some cases there is dilatation of the colon proximal to the lesion. The double contrast method, injecting air after emptying the colon of most of the barium, often demonstrates small, non-deforming lesions, which the plain barium enema failed to reveal. This technic, and the still more recent one of demonstrating the mucosal relief show promise of making the diagnosis of early colon carcinoma more common.[13]

D. *Diverticulitis:* This is encountered practically only in the sigmoid. The filling defect produced is the result of spasm, and of the encroachment on the lumen of the bowel by the pericolic inflammatory tissue. As a rule, diverticula are visualized in the more proximal, uninvolved portion of the colon. These appear as rounded, knob-like projections from the lumen of the colon. The segment involved is usually much longer in diverticulitis than in carcinoma.

E. *Ileocecal Tuberculosis:* The hyperplastic type of the disease causes a filling defect in the cecum (occasionally, more distally) which is often indistinguishable from that of carcinoma. It is usually more extensive than carcinoma, however, and occurs in young people.

The ulcerative type, which is much commoner than the hyperplastic type, is best visualized after a mouth meal. Fluoroscopy shows writhing and rapid emptying of the ileocecal coil. There is pil-

ing up of barium proximal to the involved area, and the terminal ileum is narrowed. Barium enema shows the colon to have a smooth edge, with obliteration of haustra, although not as marked as in chronic ulcerative colitis.

F. *Mucous Colitis:* There is spasticity of the colon, although nothing characteristic. It has been shown that the "string sign," even when present, is not pathognomonic of this condition, because anything that will cause an excess of mucus in the colon may give the sign. Long shreds of mucus, adherent to the mucosa, retain some of the barium, and after partial evacuation, the shreds with barium adherent look like strings.

G. *Celiac Disease:* The colon is often dilated to a diameter of four inches, or even more, as shown by x-ray examination. An incorrect diagnosis of Hirschspring's disease is not infrequently made in such cases. In the latter disease obstipation rather than diarrhea is the leading symptom.

VIII. *Gastric Analysis.*

It is not often necessary to make a gastric analysis in a case of diarrhea, but doing so has brought to light many an obscure case of chronic diarrhea by the finding of an achylia gastrica or achlorhydria. Fractional gastric analysis shows the degree of gastric acidity, the presence or absence of ferments, and the emptying time of the stomach. The small Rehfuss or Einhorn tube cause very little discomfort to the patient.

CONCLUSIONS

1. It is not possible to diagnose correctly every case of chronic diarrhea. Much investigation remains to be done on this intricate problem.

2. Allergic diarrhea is a comparatively new concept, the surface of which has only been scratched.

3. The nervous mechanism of many diarrheas is still a mystery. It is possible that some cases are due to the removal of normal inhibition, because we know that cutting the vagus or splanchnic nerves, or both, in a rabbit, commonly kills the animal by diarrhea and inanition.

4. We know very little about disturbances of absorption and their rôle in the production of diarrhea. The pathologic physiology of the small intestine remains pretty much of a mystery.

5. A surprisingly large number of amebic colitis cases have been so diagnosed at autopsy, the organism having been overlooked during life.

6. Finally, the author agrees with the concept of Thomas Brown that we often think of the habit of constipation, but we never think of the habit of diarrhea. Since so many people without structural change develop chronic constipation, it is not improbable that a similar process occurs in regard to diarrhea, in which we may have a disturbance of the delicate balance for controlling the peristalsis which results in normal evacuation. Many cases probably represent a similar habit factor which had its origin in the past, and which has never been broken by proper therapy.

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NASAL ALLERGY*

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Allergy, originally defined by von Pirquet as altered reactivity of cells and tissues, is perhaps the most universally accepted term used to describe a state of human hypersensitiveness to proteins, whether they are derived from pollens, animal danders, foods or other less common sources.

The term anaphylaxis, coined by Richet, to mean without protection, is a term applied to the induced manifestation of hypersensitiveness in animals and is due to an antigen antibody reaction. Whether the phenomena in animals and humans are identical, has not been proved. Suffice it to say, they are alike in many respects.

Although volumes have appeared in the literature on the theories of allergy, little is known of the true mechanism of allergy. Therefore, I shall not discuss any of the theories but shall confine my remarks to the known facts as they relate to the rhinologist. ,

In recent years, clinical manifestations of allergy have received considerable attention. Stimulated by the work of Coca, Duke, Vaughan, Hansel and others, the medical profession has been more alert to recognize allergic manifestations and

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has followed them through until the exciting agent has been identified. Since, in many cases of sensitization, there are symptoms that are referable to the nose and throat, the rhinologist should have sufficient understanding of these cases so that he can properly recognize, diagnose and treat them. The number of individuals who are predisposed to sensitivity is large. It has been estimated that from one to two per cent of the entire population of the United States suffer from manifestations of nasal allergic disease.[1] It has been found that perfectly normal individuals may acquire some form of nasal allergy by long contact with powerful sensitizing substances. There are certain constitutional differences in the allergic individual which allow him to become sensitized. This constitutional susceptibility is hereditary in more than one-half of the cases.[2] Over 80 per cent of allergic cases begin under forty years of age and about 33 per cent before the age of ten.[3] The earlier in life an individual becomes sensitive, the greater the tendency to multiple sensitivity. Specific hypersensitivity is not inherited but the ability to become sensitive is inherited. Transmission is twice as frequent through the female as through the male.[4] A bilateral family history results in an increased tendency for symptoms to develop in the first decade of life.[5] All members of one generation may escape the disease, but they are capable of transmitting the tendency. It is difficult, in the present state of our knowledge, to define in terms of biologic change the way in which an individual with an allergic tendency differs from a normal person. Several students of this subject have stressed the hyperexcitability of the sympathetic nervous system and the increased permeability of the skin and mucous membrane.[6]

The specific exciting agents causing nasal allergy may be divided into:

1. Inhalants: These consist of pollens, animal emanations, vegetable powders, dusts and drugs, and constitute the most important factors in producing nasal allergy.

2. Foods: Reactions may result from the ingestion of certain foods, such as wheat, milk, eggs, fruits and vegetables. Sensitization is not always limited to one food but to any or to several foods.

3. Bacterial protein: Whether or not allergic reactions result from bacterial proteins has not yet been decided. The general concensus is that bacteria are secondary invaders.

These specific factors are the exciting causes but there are many other nonspecific, non-allergic causes that may act as predisposing factors.

Vaughan's theory of a balanced allergic state serves to express this inter-relation.[7] In the balanced state these exciting agents or allergens may not be sufficiently potent to upset the balance, but if they are disturbed by a nonspecific, non-allergic factor, either psychic, endocrine, nasal, toxic or environmental, allergic symptoms will follow.

Allergic individuals usually present a rather characteristic picture. The blood pressure is usually low, and the sympathetic nervous system is usually unbalanced. Allergic persons as a rule are energetic, above the average in intelligence, and of an excitable type. Balyeat[5] has stated that allergic patients withstand intercurrent diseases well, because of the more or less constant antibody formation.

When a patient presents himself to us manifesting such cardinal symptoms as sneezing, nasal obstruction, and watery discharge, we should be on the alert to recognize possibilities of allergic disease, and should proceed with a routine method of investigation, as follows: an extensive and detailed history including nasal symptoms, rhinoscopic examination, examination of nasal secretion, x-ray studies, and cutaneous tests.

NASAL SYMPTOMS

Unusual care should be instituted in taking histories. There is no disease group in which a history is more important and there are few histories more difficult to take. The family history should be searched for manifestations of hypersensitiveness, such as asthma, eczema, urticaria, food and drug idiosyncrasies, etc. A description of the patient's environment at the time of the first symptoms should be obtained. If the symptoms are more marked at night or early in the morning, something in the home or the room should be suspected; if symptoms are more noticeable during the day, something connected with the patient's occupation should be suspected. If the particular complaint is perennial or seasonal, that fact may be diagnostic. The patient should be asked if relief has been secured by changing his environment. The history alone may determine what specific agent should be suspected. Nasal symptoms of allergy are characterized by periodic attacks of sneezing, watery discharge from the nose, itching and nasal obstruction. Perhaps the most easily recognized manifestation of nasal allergy is that of seasonal hay fever, due to pollinosis, severe in nature, seasonal in character and of short duration. In the perennial or non-seasonal type of allergy the symptoms are not so severe. They occur intermittently or throughout the year. They may be confused with frequent head colds and sinus disease and treated surgically without relief.

RHINOSCOPIC EXAMINATION

After the history has been taken as thoroughly as possible, a careful nasal examination should be made. Physical signs vary with the stage of the disease. The appearance of the nasal mucous membrane in patients showing allergic reactions has been well described by Coates[8] and more recently by Hansel.[9] These observers emphasize the bilateral character of the pathologic change, depending on severity and frequency of attacks. In the early cases the mucous membrane is pinkish gray in color, and is so markedly edematous and boggy that nasal breathing is often completely obstructed. In patients having typical seasonal hay fever, the symptoms do not last long enough to produce permanent changes in the mucous membrane. Consequently, during the inactive season, except for the discoloration, the mucous membrane appears normal. In patients of the non-seasonal hay fever variety in which symptoms may last more or less throughout the year, striking pathologic changes are manifest. Because of the generalized hyperplasia of the epithelium, the membrane takes on a pale gray color. This change is more marked over the anterior tips of the middle turbinates and in the ethmoid region. This hyperplasia and edema of the submucosa over a long period of time may give rise to polypoid degeneration.

In the tissues removed from the nose of patients manifesting clinical symptoms of allergy uncomplicated by secondary infection, Hansel found definite histopathologic changes in the epithelium; thickening, hyperplasia and polypoid degeneration; in the submucosa he found eosinophilic infiltration, edema and a varying number of mononuclear lymphocytes and connective tissue cells. The glands of the submucosa were found to be compressed and atrophic, and the blood vessels dilated, thickened and compressed. This pathologic condition as described frequently prepares the soil for a secondary infection, superimposed upon the allergic disease. The picture is then modified by the appearance of varying degrees of infiltration with polymorphonuclear leukocytes, plasma cells and round cells. The increase of polymorphonuclear cells may obscure the prominence of the eosinophiles.

In a primary sinus infection or suppuration there is a striking absence of vasomotor symptoms. Upon examination of the nose, the mucous membrane appears injected and polypi may be present, but they are more firm and compact than those seen in allergic disease. Primary suppuration is usually unilateral although it may be bilateral; the pathology is usually confined to the region of the involved sinus and the generalized discoloration of the membrane as seen in allergy, is entirely lacking.

NASAL SECRETIONS

Nasal secretions vary from a thin watery discharge to a thick tenacious mucus. In the early cases the secretion is usually more profuse and watery. If a secondary infection is present the secretion becomes mucopurulent. Microscopic examination of the nasal secretion should be made to determine the presence or absence of eosinophilic cells. The presence of eosinophiles is suggestive of allergy and the occurrence of large numbers of them, almost pathognomonic. The absence of the eosinophiles, especially in chronic cases with suppuration, means nothing. Eyermann,[10] in a recent article, stated that in a group of hypersensitive cases, 72 per cent showed the presence of eosinophiles. The part played by the eosinophiles in nasal allergy is unknown. Alexander[11] stated that eosinophiles appear to be called forth by foreign proteins entering the body and seem to be attracted to the site of the invasion.

X-RAY STUDIES

The x-ray examination of sinuses in nasal allergy will show clouding or haziness in the majority of cases. This does not always imply the presence of an active disease, because if the roentgenograms are taken at a time when allergic disease is inactive, the membrane will be normal. All cases of nasal allergy in which sinus disease is suspected should be x-rayed following the introduction of lipiodol. Various degrees of thickening of the sinus mucous membrane or the presence of polypi may be determined. On the basis of these findings, and the history, we can determine whether or not the sinus should be opened.

CUTANEOUS TESTS

Much has been written in recent years concerning the dependability of skin tests in the diagnosis of allergic disease. Too often skin tests have been relied upon entirely for a diagnosis and as an index to treatment, whereas, they are only one link in the diagnostic chain. Skin tests are to confirm a diagnosis as suggested by the history, and to point out other possibilities, but they should be made by one who is especially trained in this work and the proper interpretation of the reactions is essential. Alexander[12] has shown that the allergic state may exist in the presence of negative skin tests because of the fact, that in a given allergic individual, only certain organs are receptive to allergens, and unless the skin is likewise receptive, negative tests will result.

TREATMENT

The treatment of seasonal and non-seasonal forms of nasal allergy may be discussed under several headings. Specific treatment aims at the elimination of the exciting agent and desenitization, if the former is not feasible. Whenever possible, sources of sensitization should be removed, as in foods. However, many cases are complicated by multiple sensitizations. It is frequently necessary to modify or change the mode of treatment several times during the course of observation. Nonspecific treatment has been advocated and used with temporary benefit in general allergy where the primary source of disorder has not been found. Local and general treatment is usually palliative, giving only temporary relief. This form of treatment is confined to the use of such drugs as epinephrine, ephedrine, cocaine and atropine.

Operative treatment of the nose and sinuses in allergic conditions is a much discussed subject. I feel that every rhinologist will agree that there should be clear-cut indications for operative interference. Definite sinus disease should be treated, polypi should be removed, and other measures instituted, such as removing the middle turbinates to improve nasal breathing and to restore sinus ventilation. However, I can say without fear of contradiction that there has been too much nasal surgery performed in allergic disease, and many cases are made worse thereby. Possibly it was because the allergic condition was not recognized.

CONCLUSIONS

1. Although the theory of allergy has been much discussed, little is known of the true mechanism of allergy.

2. The individual who is hypersensitive is vastly different from the one who is non-sensitive.

3. The specific hypersensitiveness is not inherited, but the ability to become sensitive is inherited.

4. A detailed and carefully elicited history must be taken of these cases.

5. The nose should be examined in every case of suspected allergy, because the findings may be a valuable adjunct in making a diagnosis.

6. Non-suppurative or hyperplastic sinusitis should be considered allergic until proved otherwise.

7. Allergic nasal disease should be treated conservatively.

8. Surgical interference should be instituted where pathology is present and to restore proper sinus ventilation.

In closing, it is not my contention that allergy is solely responsible for the diseased conditions herein presented, but I wish to emphasize the importance of recognizing allergic manifestations, when such cases present themselves.

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Discussion

Dr. Raleigh R. Snyder, Des Moines: The subject of allergy, which has been presented by Dr. McPherrin, is one of great interest to us all. Both terms, anaphylaxis and allergy are in use today, but with slightly different meaning. Anaphylaxis has been applied to the explosive reaction as studied in experimental animals, and to the similar but rare explosive reaction in man, while allergy, as a rule is used in the clinical description of those diseases, the understanding of which has been fostered by studies in anaphylaxis.

One of the earliest references to what we now call hay fever was by Botallus of Pavia in 1565, who noted that the smell of roses produced sneezing, headache, running of the nose, and weeping. Similar reports were made by various other observers without suggestion of the causative factors, except perhaps the odor of the plant.

In 1819, John Bostok, an English physician, placed hay fever in the list of clinical diseases, and carefully described his own case.

Charles Blackley, another Englishman, was the first to demonstrate conclusively that pollen from plants was responsible for many cases of hay fever and asthma. He published his first work in 1873. Dr. Morrill Wyman of Cambridge, Massachusetts, wrote of his studies of ragweed pollen as a causative factor in 1872.

The history of food allergy can also be traced back several hundred years. Some of the earliest reactions noticed were those following the ingestion of shell fish, strawberries, tomatoes and similar foods. Sensitization to animal epithelium was described as early as 1868 by Hyde Salter of England, who found that his attacks of asthma were due to the presence of a cat in his rooms.

There is, of course, a large group of sustances to which we may be allergic that do not fall in the pre-

ceding groups. Probably the percentage of allergic individuals in the United States is somewhat greater than Dr. McPherrin has stated, some authors placing it as high as ten per cent. As he said, when we are making a rhinoscopic examination on a patient complaining of sneezing, stuffy nose and obstructed breathing, we should always bear in mind the possibility of an allergic background. Once a definite allergic condition is established we should then make a most exhaustive effort to find the cause. We should take a most careful history, and remember that allergy is not always manifested by nasal symptoms alone. We must bear in mind the eczema-hay fever-migraine-asthma complex which may exist as separate or combined factors in different members of the same family. Accurately kept food and general diaries are invaluable when we are trying to determine what food or what circumstance is playing a part in the allergic condition.

Skin tests are a distinct aid, the scratch test being the simplest and usually the one with which the study is started. A very minute scratch is made in the skin, not deep enough to draw blood, and a drop of the allergen rubbed in with a sterile toothpick. After 20 to 30 minutes the positive reactions stand out from the others as being more swollen, pale in the center and with a wide surrounding zone of redness. Occasionally a positive allergen will fail to show the more pronounced immediate action, becoming positive only after a few hours. The scratch test has the advantage of being painless, with practically no risk of a severe reaction.

The intradermal test in which a minute amount of the allergen is introduced through a fine hypodermic needle directly into the tissues of the skin, is more reliable and the reaction is more clear cut, but it is more painful and more likely to produce severe reaction unless proper precautions are taken. This may be done by using for intradermal tests only those allergens which are negative to the scratch test. A positive allergen may give a negative scratch reaction but almost always gives a positive intradermal reaction; hence the need for intradermal tests. Both the scratch and intradermal tests should be read at the end of 30 minutes and again at the end of 24 hours.

The treatment of allergy involves a wide range of methods and should be preceded by a thorough physical examination. We have to consider environmental rearrangements, removal of allergens, elimination diets, the employment of food and general diaries, removal of the patient from the neighborhood of allergens, and physiologic readjustments through desensitization. As the essayist has noted, some drugs are used of which no doubt ephedrine heads the list, since it is used both locally and internally. In combination with amytal or luminal it is at times very useful in allergic conditions associated with asthma. The use of peptone injections and protein shock has at times been found to be of value. I agree heartily with Dr. McPherrin that nasal surgery should be conservative, but we must not be unmindful of the fact that proper surgery at the proper time may do much good.

Our attention is called to a recent article by Leslie M. Joy on "The Treatment of Hay Fever and Pollen Asthma by Airconditioned Atmosphere." Hospital rooms were equipped with apparatus furnished by the Frigidaire Company which cooled the air to ten degrees below the outside temperature and maintained a humidity of 40 per cent, which is an ideal atmosphere. The relief of patients depends not only on the cooling of the atmosphere but also and chiefly on the fact that the atmosphere is cleansed of the offending agents. Complete relief was given patients suffering with hay fever whether they occupied the room for a few hours or longer periods. Striking relief was given pollen asthma patients within 12 hours. For those who can afford it, great relief can be obtained by the installation of this system in the home or office.

Dr. James A. Downing, Des Moines: The histologists have tried to tell us that allergy is immunizing "gone wild;" a hyperimmunity. If, then, we are to believe our histologists and our experimental physiologists, how can we expect to cure these people by injecting them with the same substance to which they are immune? Our horse is running backward instead of forward. Until the physiologists, the histologists and the biochemists get together and give us some common ground on which we can meet, we are not going to make much progress in the treatment of allergy by reducing the sensitivity.

It seems to me we should be particularly careful, especially in children. Every year we are seeing more and more children who are allergic to one thing or another, either to food disturbances or emanations they get around the schoolroom or home. I do not know of anything more disconcerting than removing the tonsils and adenoids of a child because her nose is stopped up and have her worse after you get through than before. The status of the mother's mind is not good either and she does not hesitate to tell the neighbors that Mary is worse than she was before they removed her tonsils.

I have also seen, and have done, too much nasal surgery. I think this is true of all of us who have been in practice any length of time. Particularly before allergy became very well known there was a lot of surgery performed on noses, and we must admit that most of these people are worse now than they were in the beginning. I am speaking more particularly of the non-seasonal variety of allergy. We will all agree that the patient who has a very irregular, crooked septum is in a much better condition if you give him six ten-thousandths of an inch more breathing space when his seasonal attack of hay fever occurs.

The non-seasonal variety of hay fever is particularly trying to evaluate. It is a very common condition in women. I suppose that radio programs are stirring up a certain amount of allergy by insisting that women try different brands of cosmetics. There are about three bases for face powder; arrow root,

rice flour, and starch. Arrow root is the basis for about 50 per cent of the face powders; it is also the basis of a popular dry shampoo, and many people are allergic to it. One of the first things you should ask a woman who comes in with a nasal allergy, is whether or not she has changed her brand of face powder in the last week or two.

The allergic patient should be talked to very frankly, and he should be made to realize that even if you find the cause of his condition, that five per cent can be cured, twenty per cent can be improved, but the remainder are unaffected. The patient can always say, if he happens to be in the five per cent, "It is a wonderful cure." If he happens to be in the seventy-five per cent that do not show any improvement, he will say, "That is all bunk; the practice of medicine is haywire."

Dr. James E. Reeder, Sioux City: I wish to emphasize the unfortunate situation in which we otolaryngologists have been placed; not until the last four or five years have we fully recognized the perennial type of nasal allergy. It is indeed unfortunate that so much unnecessary surgery has taken place in the perennial type. We have all had patients suffering from chronic allergy who are more than willing to have surgical interference. It is this type of case that has placed sinus surgery into such disrepute with the laity. As the result of public reaction those patients with cases of an infectious type, that really need and should have surgical interference, are always very much opposed to that procedure because of the fact that other allergic cases have been repeatedly operated upon with no permanent cure.

We are now hearing much about the pale and red membranes, the red membrane being of the acidosis type and the pale membrane the alkalosis type. We have been told that a change in diet in an alkaline or acid base will change the membrane from red to pale or vice versa respectively. I am inclined to question this, since up to the present time it has been only an empirical observation.

I think in the final analysis of allergic rhinitis the biochemist will solve the problem, as the desensitization of these cases so often is temporary and at its best, not very satisfactory. Since this in itself is evidence that the chemistry of the body is out of balance, it seems most logical to me that the problem will be solved through the services of the biochemist. Why should an individual be well for 30 or 40 years, and suddenly become allergic unless this biochemistry has suddenly become unbalanced?

In conclusion I wish to state that as rhinologists we frequently see these allergic cases first, but the field is so vast that it is only through the combined efforts of the rhinologist, allergist, botanist, and biochemist that, under our present knowledge, we are able to give these cases much relief. However, even under the present scheme of handling these cases, our treatment is, for the most part, empirical.

Dr. Harold J. McCoy, Des Moines: I think we should revise our nomenclature and discard the term "allergy" for "hypersensitiveness."

We have learned from our treatment of tuberculosis by tuberculin, that the homeopathic dose is much more effective. Therefore, another thing we must bear in mind is the degree of hypersensitiveness as well as the quantity of material to which the patient is sensitive. If certain people can be withheld or kept away from large amounts of the material to which they are sensitive, they may be kept very comfortable.

The question of immunizing these people, as brought out by some thinkers in the use of tuberculin, is that they should first desensitize the patient. This is sometimes very difficult, but research workers are recently arriving at conclusions that may offer great aid in the future treatment of these cases. For instance, the Journal of Allergy is filled with ideas. It would take a Philadelphia lawyer to understand what they are driving at, but maybe we will arrive at something very soon that will help us with our treatment of these susceptible or hypersensitive people.

Dr. McPherrin (closing): I appreciate the discussion and the points that have been brought out. There has been considerable progress made in the study of allergy in the past ten years, especially in histopathology. However, until we know the true mechanism of allergy, and why there is a difference between the normal individual and the hypersensitive one, our problem is a difficult one.

ALLERGY IN RELATION TO DERMATOLOGY*

LOUIS J. FRANK, M.D., Sioux City

In the study of allergy the first consideration is the nature and mechanism of the condition, to enable us to visualize the underlying processes responsible for the clinical phenomenon. This is an elementary presentation dogmatically stripped of confusing or conflicting phases for the sake of clarification.

Anaphylaxis has been intimately concerned with protein. The protein has necessarily been of the more complex variety, containing the benzene ring. The simple gelatines have failed to sensitize. Zinsser's explanation of this has been logical. Material entering the body parenterally is disposed of in two ways; it is absorbed by the cells and used for food, or it is absorbed by the cells, split up and eliminated. The protein molecules responsible for anaphylaxis are large, unwieldy, and non-diffusable; they cannot be absorbed. The cell then produces antibodies to attach to the material, absorb and eliminate it. Clinically it is well known that many nonprotein substances may sensitize. These substances are simple and diffusable; they may enter the cell without antibody production. Landsteiner showed that many simple substances, such

* Presented before the Woodbury County Medical Society, April 27, 1933.

as arsenic, iodine and organic acids, can combine with the serum protein and produce non-diffusable compound proteins which are specific in their sensitizing and shock powers. This experimental information may be utilized to explain the production of antibodies for the many simple nonprotein allergens.

The antibodies, so far as is known, are structureless. They are to be regarded as ferments. They are the changed properties of the cell or the serum which contains them, and are formed by, and remain intimate to the cells. When formed in excess, they are thrown free into the circulating blood. There are several types of antibodies: precipitins, complement-fixing antibodies, anaphylactic antibodies, reagins, and others. The function of each is not yet clear.

All manifestations of allergy are expressed by two simple processes, contraction of smooth muscle, or capillary dilatation and exudation. This limited and uniform response, whether caused by horse serum or aspirin, egg white or picric acid, lead to the search for a uniform end product. Histamine was found to fulfill the place. Injected into guinea pigs, histamine produced marked smooth muscle spasm, and dilatation of the peripheral capillaries. The resulting picture was that of anaphylactic shock. When histamine is applied locally to the skin it produces an immediate urticarial reaction, the triple response studied so carefully by Lewis. The same type of reaction occurs in skin tests with pollens and danders.

Summarizing, we will repeat. When a foreign material enters the body parenterally, whether it be pollen through the mucous membrane of the nose, or extract of Primula through the intact skin, the cells in their effort to absorb and eliminate the unwieldy molecule, produce substances in the nature of ferments, called antibodies. The individual or certain of his organs are then said to be sensitized. The material, on subsequent entrance, reacts immediately with the already present antibodies. Injury to the cell takes place, perhaps in the nature of a precipitate on its surface; histamine, a substance already present in the cell, is released; this is followed by its typical pharmacologic action on the affected structures; and the result is the clinical manifestation of allergy.

CLINICAL CONSIDERATIONS

The clinical aspects of allergy falling within dermatology concern themselves with several types of response. First, there is the skin response, simple catarrhal inflammation or the eczematous reaction; second, the vascular response as expressed by the urticarias, erythema multiforme, and numerous erythema multiforme-like eruptions; third, bacterial allergy, comprising the "id" eruptions, tuberculids, moniliids, trychophytids, and envolving itself with the tuberculin and tuberculin-like reactions. This third group is perhaps the least understood of a little understood subject. However, recent work on the bacterial "specific soluble carbohydrate substance," promises to open new fields and clarify this phase. The present discussion will be limited to the first type of response, the eczematous type of reaction. Not wishing to enter into the time honored debate of eczema versus dermatitis, we will define eczema as any simple catarrhal inflammation of the skin. The eczema syndrome is caused by the relative interaction of a large number of predisposing and immediate causes. Certain etiologic features allow the grouping of many of these cases into definite subdivisions. One of these is called contact dermatitis, occupational dermatitis, or, more broadly, dermatitis venenata. It is characterized by involvement of the exposed parts, the hands, arms and face, not infrequently extending to the genitalia and other parts. The eruption is acute from the standpoint of objective signs, redness, edema, vesiculation and weeping rather than from the standpoint of duration.

The study of this type of case differs somewhat from the usual routine. The intradermal and scratch tests, important in other allergic processes, are not of much help in these cases. The method of application of the scratch or intradermal test is not the natural condition of the contact. A positive reaction to these is urticarial; it simply means that the skin is sensitive to the material in the manner in which it is applied. It does not mean that that material is the cause of the clinical trouble. The negative skin tests will be considered in more detail later. The clinical condition, in an allergic process should be reproduced through the proper portal of entry, whenever practical. In contact dermatitis the test indicated as most nearly reproducing the conditions of the dermatosis is the patch test. A description of this important procedure is necessary. The suspected material should be applied on a small linen patch, covered with a piece of dental dam, and held in place with adhesive tape. It is removed in twenty-four hours. If a positive reaction is not present at this time, it is observed again after forty-eight hours, and at intervals up to two weeks. Occasionally a reaction is delayed that long. The reaction must simulate the clinical eruption; it must be eczematous. Erythema alone is disregarded. Simple as this test is, there are some pitfalls. The material in the dilutions used for the test must not be a primary irritant. Gasoline, for example, is

a primary irritant and confined under an impervious cover for fifteen minutes produces irritation in any skin. There are no satisfactory diluents for gasoline. If this factor is not considered many erroneous deductions will be made from the patch test. A new substance, not previously worked out, must first be tried in various dilutions on a number of normal subjects. Unfortunately, the English literature does not, as yet, contain a classified list of non-irritating dilutions of skin irritants. The site selected for the test also warrants consideration. The back is generally used because it presents a relatively hairless surface of large area for applying a number of tests. However, the sensitized skin areas may be entirely local; that is, those areas exposed to the allergen alone may be hypersensitive; in this case a test to the back would be negative. Fortunately, the sensitization is usually not local. On the other hand, the skin to which the test is applied must be absolutely normal, because the eczematous skin is in a state of heightened irritability, and nonspecific reactions might occur.

Returning to the etiology of contact dermatitis, sensitization may take place after the first contact with a substance. Often it develops after long repeated contacts. The fact that a patient has handled a material for the greater part of his life is no point in excluding a suspected excitant. An illustrative case is that of a former patient who presented an acute dermatitis on the buttocks. The lacquer of the toilet seat was suspected and the patient was asked to scrape off and bring in some of the lacquer. His lack of confidence was ill-concealed. He argued that the eruption was of short duration while he had used the same toilet seat most of his life. The lacquer, however, gave a beautifully positive patch test in twenty-four hours. Thus, repeated exposure to an allergen appears to be an important factor. The thinner, more active, skin of the young is said to be more readily sensitized than the thicker, drier, skin of the aged. Strange to say, nonspecific irritations affect these skins conversely. An inflammatory reaction favors sensitization. Analogy is seen here in the frequency with which the first attack of hay fever dates to a nasal infection during the pollen season. The influence of an hereditary predisposition toward this type of sensitization is disputed, but it is generally believed not to be an important factor. Block has demonstrated that by painting the intact skin with extract of Primula, of the simple non-nitrogenous formula, $C_{14}H_{20}O_3$, he was able to overcome any constitutional factor by concentration of the allergen. One hundred per cent of his test subjects were sensitized in this manner. He himself was one of the victims and he is now so sensitive that on entering a room containing dried powdered primrose leaves, an eczema of long duration results.

We have thus far considered an eczematous dermatitis caused by external contact with a material. The suspected material is proved by reproducing the eruption. This is done by deliberately applying the material to the skin by means of the patch test. The same material evokes no reaction upon being applied to the normal skin. This altered reactivity exhibited by the eczematous subject is called allergy. We will now analyze this mechanism and, where possible, compare it with the mechanism of allergy given in the first part of this paper.

The first fact noted is that the majority of the manifestations of hypersensitiveness outside of the skin, food allergy excepted, are immediate on contact with the allergen; the reaction to the patch test develops in from one to fourteen days. This might be explained by considering the corneous layers of the skin as delaying absorption, thereby delaying contact of antigen and antibody. Injected beneath the corneous layers, or intradermally, we would expect no delay; rather we would expect an immediate reaction. This does not occur. As stated before, the usual skin tests are of little value here. We are reminded that the materials responsible for contact dermatitis are nonantigenic in nature. They are diffusable substances of relatively simple structural formulae. Even ragweed pollen as a cause of dermatitis is applicable here. It has been shown that the alcohol soluble oil of the pollen is responsible for the dermatitis, while one of the protein fractions of the pollen causes hay fever. When a nonantigenic material is applied to the intact skin, and this nonantigenic material becomes antigenic, we may conclude that the material was changed while in contact with the stratum corneum of the skin. We apply Landsteiner's experimental facts. The material forms compound protein combinations while being absorbed by the stratum corneum; these combinations are antigenic, specific in their sensitizing and shock powers. This is my personal theory; it lacks proof, but it fulfills the purpose of theory; it offers a working explanation of the known facts which serves in the absence of more complete knowledge. It is supported by experimental facts gained from the literature. This has all been based on the supposition that antibodies are formed, and play a part in the production of this dermatosis. Passive transfer usually clinches the assumption that a process is of the antigen antibody

type of allergy. However, in contact dermatitis passive transfer is usually negative. We believe that the antibodies remain fixed to the tissue cells, hence are not passively transfered.

A typical case report may be of value in emphasizing some of these points. Mrs. M., thirty-six years of age, had had frequent skin eruptions in the past. The present instance dated to a cut on the palm of the right hand, received three days previously. For antisepsis, she had poured a small amount of turpentine into hot water and applied it on a pack around the hand. Three days later the hand was swollen and covered with confluent vesicles, both palm and back corresponding with the area to which the pack was applied. The left hand, five days after handling the turpentine, showed an acute vesicular eruption. Both areas continued to grow worse and to extend up the arms in spite of soothing treatment. One week later the face became edematous and the eyes were swollen shut. The neck and chest developed a pruritic erythematous eruption, as well as the feet and legs. The patch test with turpentine applied to the back was strongly positive in twenty-four hours. The entire outbreak was a month in disappearing.

In interpreting this case we are unable to say whether the patient was sensitized by previous exposure to turpentine or whether she sensitized herself with the present application. The patch test done after the eruption had appeared does not clarify the situation. The dermatitis appeared first at the site of application of the hot pack. The incident erythema no doubt hastened this appearance. Analogous examples of this are many. I wish to mention two. One is a case of my own observation; secondary syphilis appeared on the left arm of a patient six days before the general outbreak, which followed a moderate sunburn of the arm received while driving a car. The other is a case of smallpox illustrated in Sutton's textbook. This eruption at the site of counter irritation produced by iodine preceded the general eruption by three days.

The second area of involvement was the left hand which was next most intimately in contact with the turpentine. The later appearing areas on the face, neck and legs can be accounted for by direct application of small amounts of the turpentine by the hands. The protection afforded by the inactive horny layer, plus the small amount of allergen account for the delayed appearances. The alternate interpretation would be that the extensive eruption was caused by allergen absorbed at the area of maximum application and transported by the blood to the distant foci. The same question arises in dermatomycosis with dermatophytides. It cannot be answered with finality at present. The sensitization must have been widespread, which, fortunately for the patch test, is usually true, although it may remain local. Passive transfer, essentially a research procedure, was not attempted. The slow response of these cases to treatment is worth mentioning. In contradistinction to the relatively rapid abatement of most manifestations of allergy after removal of the allergen, food allergy excepted, the inflamed skin seems necessarily to undergo a definite cycle before the condition subsides.

What results may we expect from this relatively new mode of attack on this type of dermatitis? Stauffer in Germany was able to determine the offending material in 48 out of 49 cases. To obtain such results, it must be pointed out that unlimited time is required, as well as the peculiar Teutonic type of mind. Americans have been successful, as a rule, in solving approximately 30 per cent of their cases.

It is worth mentioning also that attempts at desensitization have been uniformly unsuccessful. The explanation has been offered in the literature that this failure is due to the absence of circulating antibodies in contact dermatitis. To me this is untenable. It is the antibodies intimate to the tissue cells that are responsible for the manifestations, not the "exportable surplus" circulating in the blood. In the most successful clinical examples of desensitization of hay fever, the skin tests often remain as large, or larger, than before the treatment, and the circulating antibodies are just as numerous.

We will consider allergy in two other groups of the eczema complex more briefly. Infantile eczema, like that in adults, is a heterogenous group presenting many factors. The majority of cases, however, fall into one class, alimentary allergy. In the case of nursing infants the offending food may be in the mother's diet. Of many foods which might be incriminated, three stand out most prominently; wheat, milk and eggs. Skin tests in the older infants are perhaps of higher value than in adult cases. Passive transfer is usually positive. This type of allergy tends to disappear spontaneously by puberty or sooner. However, different allergic manifestations frequently replace the eczema. Food allergy reaches its crescendo, as far as eczema is concerned, in these infantile cases. It gradually decreases with age until, in the adult, it no longer occupies an important place in eczema. This is contrary to popular belief but dermatologic opinion, while not denying

its occasional functioning in the adult, refuses to consider it of frequent occurrence.

The last group we will discuss has been variously designated as prurigo of Besnier, diathetic eczema, eczema-asthma-hay fever complex or disseminate neurodermatitis. The picture shows symmetrical involvement of the popliteal and anti-cubital flexures, the wrists and the face. The skin presents a chronic leathery lichenification which at intervals may be transformed within a few hours into an acute weeping eruption. The patients frequently have concomitant manifestations of allergy in the form of hay fever or asthma. They are active, ambitious, neurotic individuals, going at race horse speed. The adults usually show a forced restraint and calm. The allergens responsible for the asthma or hay fever are frequently found. The same factors are not responsible for the eczema. Skin tests show multiple sensitivities. Each new therapeutic attack leads to rapid response—for a while. However, they do not entirely disappear and are soon back to the point where they started. They react to allergens; they react to emotions; they react to sensations; they react to stimuli. Stokes says that the most important feature of these cases is their inherent propensity to react, rather than to what they react. He believes that there is a constant shifting of the allergic pattern and as soon as one precipitating and one or two predisposing causes are removed, several more spring into the field. The point we wish to make is that this phase of allergy is a fundamental state of tissue hyperirritability, involving not only the skin but most of the bodily functions, even the personality make-up. It is what we might call diathetic, in contradistinction to allergic. Any normal individual can be so altered as to give the pure allergic reaction, as shown by the work of Block, previously referred to, and does not necessarily involve a bad prognosis. The diathetic, while operating on the same fundamental mechanism, is in a state of general tissue irritability and reacts to everything in his environment. This reactivity fluctuates, making the ultimate outlook bad. This condition is largely handed down from predecessors, not necessarily asthmatic in nature, but of a neurotic and unstable character, with an inherent tissue irritability, possibly a result of over-civilization with all its competitive and exhaustive ramifications. Our therapeutic hope lies in the ultimate discovery of the fundamental biologic and chemical factors involved in this cellular reactivity.

Obviously this phase of allergy is too complex to lend itself to analysis in our present state of knowledge.

This discussion, confined to allergy in eczema, is likely to leave the impression that allergy comprises the whole eczema problem. This is not true. However, we believe it is the most important factor because it has been the only one to lend itself to definiteness and progress as opposed to vague intangible terms, such as, constitutional, diathetic and neurogenic.

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THE RUNNIN' EAR*

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Among my earliest recollections of beginning practice is one of a father who came to me for some medicine for a "runnin' ear"; as though it should be very easy to give him something to cure such a trivial condition. "Nothin' but a runnin' ear"—how often we have heard that! To me there are two things, rather small in magnitude, but which I have always regarded as of major importance until complete recovery—a foreign body in the cornea and a purulent ear. Both hold large possibilities for permanent injury.

When our chairman extended the compliment of this invitation, I am sure it was not with the expectation that the results of some new research would be announced, but rather that some matter of general interest would be presented which would elicit various experiences and points of view; and so, because of its high incidence, varied types and frequent gravity, this subject was chosen. I anticipate, as sometimes happens, that the discussion will be the best part of the performance.

I shall not attempt any anatomic description. That, before this body would be a work of supererogation.

For some time it has been my understanding that the great majority of ear infections originate in the inflammatory conditions of the pharynx, caused by measles, scarlet fever, diphtheria, tonsillitis and coryza. Jackson and Coates credit the largest percentage to coryza; Kerrison and McKenzie concur. I have understood that any obstructive nasopharyngeal condition, by impairing aeration and drainage, may become a major factor in the production of ear infections. Given an active focus and an open road through the eustachian tube into so complex a mechanism, it would seem a wonder that the ear is not more frequently involved. This concept has long seemed to me as definite as a proposition in geometry.

However, in the last Practical Medicine Series, Shambaugh reviews, and apparently approves a thoroughly teutonic article, in which this view is

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abandoned. I quote; "The entire field of inflammatory and suppurative otitides is independent of nasal and pharyngeal diseases; at least no direct dependence has as yet been demonstrated. The older assumption of direct infection through the tube has had to be given up. The probability is that both ear and nose or throat diseases, when, as so often, the former follows immediately on the latter, have been caused by the same general infection, carried by the blood or lymph stream. The connection between otology and laryngology is not to the advantage of either specialty. He thinks it has been a step backward to join these two." Maybe this is so and I just do not understand; but it sounds to me refreshingly like the theory I recently heard advanced that America was not discovered by Christopher Columbus, but by another man of the same name. Anyhow I am willing to concede that it is quite as sound as Hitlerism and anti-Semitism.

There seems to be some difference of opinion as to the most frequently infecting organism. Certainly, any one of several may be the causative agent, and often it is a mixed infection of two or more. Various strains of streptococci, pneumococci and staphylococci constitute a large part; diplococcus catarrhalis, diphtheria, and Bacillus influenzae less frequently. Streptococcus mucosus and Diplococcus lanceolatus capsulatus are responsible for some very obstinate and destructive cases. It is all very fine and scientific to know which organism is the invader, but in these doubtful days when one has two guesses as to the matter of compensation, he may hesitate over laboratory expense and concentrate more on the ultimate result than on technical perfection. You have all had patients recover without ever knowing the name of the infection and after all, recovery is the most important thing.

Anatomically the ear is peculiarly adapted to retain infection, and just here I feel that I must proceed as though our teutonic savant had not upset our previous notions as to the avenues of invasion, and consider it, in the main, as coming through the eustachian tube. If he is correct it would seem that we might anticipate a higher incidence of iritis and cervical lymphadenitis in acute pharyngeal conditions than is observed, since these regions are particularly prone to metastatic invasion. My faith in the plenary inspiration of things teutonic has been rudely shaken in recent years.

A thin mucous membrane lines the tube, tympanic and epitympanic spaces and wraps around the ossicles. The classical heat, swelling, redness and pain are present, as in inflammations elsewhere. In the stage of congestion this membrane may become several times its normal thickness. Only slight thickening is sufficient to obstruct the distal end of the tube, and when the stage of exudation arrives, normal drainage is impaired or lost. In a similar way attic drainage is impaired and mastoid invasion favored. The membrana propria looses its pearly lustre and concave surface, and bulges toward the observer. Thus accumulation under pressure furnishes ideal conditions for extension through the antrum or tegmen tympani, and spontaneous rupture becomes a conservative thing on the part of nature.

Too much emphasis cannot be placed upon careful history at the outset. In a majority of cases the condition is readily apparent. In others one may have to decide whether he is dealing with an acute infection or an exacerbation of a chronic one. This is quite important from a prognostic point of view. Pain is the great outstanding feature, although it may be entirely lacking and the first thing noted be a discharge. Temperature is significant if present, but one must not be led astray by its absence. A patient who constituted one of the most dangerous cases in my limited experience had normal sleep and appetite, normal temperature and pulse, no pain and no postauricular swelling; nothing but too much pus coming from the middle ear. At operation a large perisinus abscess was drained and he made a rapid recovery.

Often one sees the ear only after spontaneous perforation has occurred. Even in acute cases this perforation may be small and inadequate, or it may be a large ragged rupture. In the chronic running ear, one may see anything from a small red-tipped nipple from which he may wipe a droplet of pus and watch it slowly reappear, to complete destruction of the membrane. In the latter case more or less fungoid granulations are present. In case of only moderate sized openings, granulation tissue may protrude, assume polypoid form and be referred to as an ear polypus. (It is my understanding that this is not true polypoid degeneration.) Again, dermal epithelium may creep in through a perforation and graft itself on the denuded bone. In the event of complete destruction of the membrana tympani and ossicles, this dermatization may be a conservative process; but where the opening is small the exfoliated surface cells accumulate, macerate, and become a favorable nidus for bacterial growth. Thus is developed a rather infrequent condition, cholesteatoma, which has no tendency toward recovery. Because of pressure, the ever increasing accumulation, and inflammatory erosion, this condition constitutes a serious menace to life.

Ordinarily, the treatment of an uncomplicated

acute case is a rather simple affair. Indeed, after spontaneous rupture, where a large opening has occurred, many recover with little or no treatment. It is, however, a very unsafe course to pursue. It is this fact that leads the laity to regard the condition with so little seriousness. To them it is only "a runnin' ear." We can all recall instances where parents have declined surgical interference in the nose or throat because one or the other had had "just the same thing" in childhood and did not "take operation but got well anyway." They did not realize the logical insecurity of generalizations based on too few observations.

Adequate drainage is nature's great method of cure, and is here as elsewhere, the first principle of treatment. I have seen patients recover by resolution through the osmotic and antiseptic action of various glycerine mixtures, or metacresol acetate, but these are to be considered only during the stage of congestion. Their period of usefulness is short. In the presence of exudates they are valueless. At the same time appropriate treatment must be given to the nose and throat. Nasopharyngeal congestion should be relieved by mild measures and in the gentlest possible manner. Opinions vary as to the use of weak cocaine solution. In Jackson and Coates, different writers talk on both sides. Personally I have found that a very small amount of one per cent cocaine, followed by metaphedrin inhalant has been helpful. Moderate shrinking occurs and drainage is facilitated. In patients old enough, a solution of two per cent silver nitrate applied to the pharyngeal orifice of the eustachian tube is helpful. Proper elimination should be secured and any concurrent condition should receive suitable attention. Here, as elsewhere, treat the patient as attentively as the special condition.

Inspection of the membrana tympani may indicate that spontaneous perforation is imminent. To wait for this, offering the information that relief will come when it happens, and poulticing to this end, is a near approach to malpractice. A clean-cut, free incision will give relief quickly and repair itself better than the irregular ragged hole that nature will make. Anyone who has seen such an incision close half way down or more, in twenty-four to thirty-six hours must have little respect for a silly puncture with a spear point lance. A slightly curved incision will stay open better than a straight one. At best, too early closure will sometimes occur; that is, before normal eustachian drainage has been reëstablished. Very early in my experience, I read that one should insert a gauze wick in the incision. I tried it twice. Now, don't laugh. You have probably done foolish things, too. I suspect the author of the suggestion was an abdominal surgeon.

Paracentesis is an exquisitely painful procedure and should always be done under anesthesia, either local or general. Nitrous oxide gas is sufficient, as a rule. For most adults I find what in the army we called CMP, cocaine, menthol and phenol crystals, very satisfactory. When this is used the ear should be mopped out with alcohol before the incision is made.

Some advise against making the cut downward because there is danger of injuring the jugular bulb. However, I would rather risk a light touch on the tympanic floor than an up-stroke on the chorda tympani. An hour later the ear should be thoroughly syringed to dislodge any clot which may be forming to close the opening. For this, salt solution is as good as anything. As to whether further cleansing should be done by dry mopping or irrigation seems an open question. In well trained hands the former is probably preferable. Otherwise, I believe the latter procedure should be followed. It is desirable, however, to leave the ear as dry as possible. Some of the books give elaborate instructions as to the use of "ear drops" at this stage. This seems of questionable value. The discharge having passed the drum membrane, its damage in the main, is done and needs only to be eliminated. Drops can hardly pass a small incision. My preference is for a loose pack of dry sterile gauze. It has a higher coefficient of absorption than cotton. If, however, there is a large opening and the declining stage has been reached, antiseptics may be used to advantage.

My bacteriologic friend, Dr. Werkman, thinks that the use of foreign proteins is not so popular now as it was a few years ago. However, some cases that are slow in reaching the declining stage are distinctly benefited by this procedure. I am sure of it in cases of iritis and keratitis ulcerosa, and it would seem that a similar action might be anticipated here. It is in this type of cases that particular attention must be paid to conditions outside the ear.

The chronic suppurating ear will often tax one's resources to the utmost. It is the bête noir of otology. One may feel he has at last achieved a cure only to find recurrence sometime later. Many of these cases exist for years, and the patient still lives, always, however, with some threat of danger. (I recall one patient in whom both ears had been discharging for forty-five years.) One should analyze the case in terms of the pathology present, as nearly as possible. Where there seems to be no immediate danger to life, conservative methods should be tried, if there is a reasonable promise of

success. Diseased teeth, tonsils and sinuses should be given consideration. I once heard Harold Hayes say that in all cases he removed the tonsils at once. While this is frequently advisable, I believe his statement of doing it in "all" cases is too broad. Adequate drainage and antiseptics may prove beneficial where too great tissue changes have not taken place. There is no remedy that will replace degenerated tissue with normal mucosa.

Some physicians object to instillations through the catheter, but my limited experience does not sustain the objection. Several silver salts and a number of dyes are available. I have found cresatin valuable. S. T. 37 proved a disappointment; 1:4000 $HgCl_2$ in 75 per cent alcohol and boric acid ad saturandum is good where there is large destruction of membrane. Oxyquinoline has been highly commended for otologic use. Merck's Index reports it more efficient for streptococcus and staphylococcus than bichloride. I have had no experience with it. A few years ago we heard much of zinc ionization. Theoretically it seemed rational, and I was on the point of preparing to try it when Dr. Lierle's paper was published about a year ago. As I interpreted his paper there is little value to be gained by the use of zinc ionization and I decided not to experiment with it.

Fairly recent and theoretically promising is the bacteriophage. I have interviewed several expert bacteriologists and they all tell me they do not know what it is, but are sure there is an elusive something we need to know more about. Certain it is that bouillon cultures already cloudy with bacterial growth may be cleared in a few hours by the addition of an infinitesimal amount of phage. At present there are two schools of thought. D'Herelle insists it is an ultramicroscopic thing, a filtrable virus, such as hog cholera, which feeds on the bacteria. Dr. Hammer of the Dairy Department tells me they apparently have much the same thing in their work with butter. There are certain strains of bacteria which give the fine flavor to butter. He tells me that occasionally they plant the culture and it absolutely will not grow. They cannot make it grow, and he suspects that it is something of this kind that prevents it. Hofenbrenner maintains that the observed changes are due to autolytic action. The case may then be cited as phagocytosis versus autolysis; or as Dr. Werkman puts it, "Is it murder or suicide?"

Of course there are many cases where tissue changes have been so marked and destruction so great, that surgical operation is the only procedure indicated. I am not attempting to consider these in detail.

Discussion

Dr. Ellis G. Linn, Des Moines: Dr. Dyer has delightfully placed before us this rather prosaic subject and an extensive discussion will not be undertaken.

First, continued middle ear discharge, all too often, results from nasal or pharyngeal pathology, and notwithstanding recent contrary views expressed in the literature, most of us will continue to believe that many infective and inflammatory conditions find their way through the tubes and produce middle ear suppurations. Severe cases of rhinitis and pharyngitis should have proper care and more particularly in seasons when such conditions are prone to become severe. Obstructive nasal tissues should either be reduced by electric measures or proper nasal surgery should be inaugurated so that unobstructed nasal breathing will result. It would be inviting failure to institute treatment for chronic "running ears" in the presence of large masses of lymphoid tissue, in the shape of adenoids and actively infected tonsils. Hypertrophied or pendant, polypoid turbinals have, over a period of years, been most satisfactorily cared for by a modified method of dehydration, originally suggested by Doan.

In addition to the several measures so clearly advocated by Doctor Dyer, may I again call your attention to the method first developed by Friel which has been employed with much satisfaction through the several years since Friel's original work. Zinc ionization has found favor with a very large number of careful men, who have been thorough in their work, who have been equipped to use this method to the best advantage, and who have carefully studied and improved their technic as they have added to their experience. You will recall Friel's technic: ½ of 1 per cent zinc sulphate solution, fifteen milliampere minutes, repeated two to six times at a few days intervals, depending upon the progress made or the number of treatments necessary to cure. I have for the last several years used a heavier dosage and I believe the results are more satisfactory. As you know, an ear with a large central perforation offers the best chance of a cure.

The ear is first thoroughly cleansed; usually an air current is passed through the middle ear from the eustachian catheter and with the head well inclined to the side, with the discharging ear down. After thoroughly cleansing and drying the ear, a two per cent zinc sulphate solution is used, positive galvanic, three milliamperes of current, two volts, twelve minutes, turned on and off very slowly to avoid vertigo. Following the treatments the ear is again thoroughly cleansed and dried and dressed dry. Ears have been cured with two or three treatments, others have been cured after a dozen treatments and some I have failed to cure.

I have two patients here, whom you may examine if you wish. They are here because the cases are somewhat atypical, because they were examined, before treatments were instituted, by another specialist interested in this work, and because they had re-

ceived abundant care before they were treated by me.

Mr. Z., twenty-seven years of age, was operated upon for chronic mastoiditis by Prof. B. in Freiberg, Germany, at eleven years of age. At the age of two years an erythermatous fever was followed by a running ear. Suppuration continued and after nine years, he was operated upon. A facial paralysis followed the operation. Much care was received and some hospitalization, notwithstanding all of which the ear had continued to discharge freely and was considerably well filled with thick pus of a bad odor when we first saw him on December 16, at the age of twenty-seven. Before being treated he was seen by another specialist who is here today. On December 16, 19, 22 and 28, the ear was treated by zinc ionization. No other treatment was given. The ear has remained dry these four months.

Miss B.'s left ear had discharged for ten years. A perforation involving the anterior two-thirds of Shrapnel's membrane was present. This is not a favorable type for treatments. After half a dozen very irregular treatments over a period of four months, she discontinued the treatment for some time. She again came in and after four treatments the ear has now remained dry for five months.

A doubt has been expressed on the part of some writers of any added merit through the use of the galvanic current and Dr. Lierle is not convinced that any curative influence is added through ionization, which is not exhibited to the same degree without the current. From a repeated, rather extended use of this means of treatment, I am convinced that it is a measure of sound merit. From experiments on non-viable tissue, there is demonstrable a depth of penetration by the broken down elements of a silver nitrate solution under the positive pole of a galvanic current, that clearly does not take place, when the same concentration of the same solution is exhibited under identical conditions, but without the current flowing. While it seems impossible to visually demonstrate a like depth of penetration by the zinc ions, it is nevertheless fairly convincing, and many experienced men are firm in the belief that, in cases with fairly large central perforations, with no cholesteatoma present, no other measures are available that serve them equally well, more especially in annoying chronic suppurations.

Dr. Dyer, closing: There is just one thing that occurs to me. The doctor speaks of silver nitrate. Under the circumstances, it seems to me with the electrolytic decomposition of the salt, that the nitric acid radical would be at one pole and the metallic silver at the other. The nitrate would be converted to the chloride by the chlorides in the blood, and then, under the action of the light the metallic silver would be deposited in the molecular state. He speaks of the silver nitrate, but I think he would have the metallic silver. If there was any great amount of it, as in Dr. Lierle's work, this metallic substance should be found on chemical analysis.

THE CONDUCT AND MANAGEMENT OF LABOR BY THE GENERAL PRACTITIONER*

T. H. JOHNSTON, M.D., Spencer

The duties of the general practitioner are many and varied, and need not be enumerated. One of the most important of these duties comes under the head of obstetrics, and every physician must be prepared to undertake the intelligent care and management of these cases. In doing so he recognizes the fact that modern mothers demand more from the physician today than was accorded the mothers of a generation ago. The modern physician is ever alert to do something to relieve the patient and to safeguard her and her baby from the dangers connected with labor, as contrasted with the older policy of letting nature take its course. It was formerly regarded as the lot of woman to suffer and give birth to children. Such suffering was accepted as the will of God and any attempt to give relief was opposed by many medical practitioners as well as by the public.

PRENATAL CARE

The expectant mother should be under the observation of a physician during the entire period of pregnancy. The routine examination of the urine and the use of the sphygmomanometer are valuable aids in the recognition of preeclamptic toxemia, and the institution of dietary restrictions and eliminative measures will do much to prevent that serious condition known as eclampsia which still remains the most important problem of obstetrics. Its cause is unknown and we therefore have no specific treatment, but progress has been made in its prevention and control. This condition occurs less frequently than in former times and fatalities have been greatly reduced.

TREATMENT OF ECLAMPSIA

A few years ago the measures advocated and used were briefly as follows: chloroform to control convulsions, venesection to relieve the hypertension, and elimination by means of magnesium sulphate by the mouth. Efforts were made in the ante partum cases to induce labor and expedite its termination.

At the present time preeclamptic toxemia is treated by rest, sedatives, elimination, glucose administered intravenously, and low protein salt free diet. If no improvement takes place or if the condition becomes aggravated, termination of the pregnancy is indicated. Dr. Clifford B. Lull of Philadelphia, advises the above mentioned treatment, which he has carried out in a series of cases under

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hospital care. When convulsive toxemia occurs, the modified Stroganoff treatment is instituted: morphine given hypodermically, colonic irrigation, gastric lavage, followed by two ounces of 50 per cent solution, magnesium sulphate administered through the tube, glucose given intravenously, 1000 cc. of 10 per cent solution, supplemented after an interval of twelve to fifteen hours by 50 cc. of 50 per cent solution. In cases of hypertension venesection is advised previous to the above measures. Dr. E. L. King and his associates of Tulane University advise an initial dose of morphine, one-fourth grain, followed by one-half gram of sodium amytal given intravenously; sodium amytal thereafter in three grain doses by the mouth every four hours; continued until it is felt that danger of recurrence is past, generally from thirty-six to forty-eight hours. In connection with the above Dr. Temple Fay and his associates of Temple University advise restriction of the intake of fluids, basing the intake upon the output of urine. Glucose is used intravenously—50 cc. of a 50 per cent solution. The treatment consists of sedation reinforced by elimination with the avoidance of radical operative measures, limiting the procedures to induction of labor, the use of low forceps, or version and breech extraction.

Other conditions requiring attention during this period are the vomiting of pregnancy and the management of hemorrhages; those accidental and those due to placenta praevia. With these brief references to ante partum problems, the active management of labor will now be discussed.

At this point it may be stated that some specialists in obstetrics do not wait for the actual onset of labor in a given case, but arrange to have this event on a set day, after it has been determined that the patient has come to full term. In this manner birthdays may be arranged to suit the convenience of either the patient or physician. This system, however, has not come into common use by the general practitioner.

The ordinary case of labor presents no difficulties which require enumeration here. Suffice it to say that some practical routine course should be adopted. This course should include initial enema, cleansing bath, scrubbing with soap and water of essential parts, shaving or clipping, and the use of sterile sheets or pajamas. Sterile rubber gloves and avoidance of any unnecessary vaginal examinations must also be mentioned. Rectal examinations have been substituted in many clinics for vaginal examinations and have proved advantageous when carried out by those skilled in this method.

ANESTHESIA

The modern obstetrician must take active measures to relieve the pain and suffering incident to childbirth. Formerly not much attention was paid to anesthesia, except to administer a small amount of anesthetic at the termination of the second stage, but an effort is now made to give relief during the entire first and second stages of labor. As a result the grateful mother has very little recollection of the occurrence, and carries away no painful and dreaded memories.

In primipara, morphine sulphate one-eighth to one-sixth plus scopolamine one two-hundredth to one one-hundred and fiftieth given early, and repeated later, if necessary, will carry the patient through the first stage with a great deal of relief. These drugs should not be administered too close to expected delivery. A margin of three hours, at least, should be allowed. Chloroform administered during the pains and anticipating them, will be found satisfactory during the second stage.

In multipara, sodium amytal, grains six to nine, or nembutal, grains three to six, given when pains are established, will produce analgesia during the first stage of labor. These doses, when supplemented by chloroform, will prove satisfactory in the second stage, and the amount should be increased as labor advances. In cases of version or in the use of forceps, when it is necessary to put the patient under deep anesthesia for a considerable length of time, ether is preferred to chloroform, and is considered of greater safety. Gas, when available, has also proved an efficient and satisfactory anesthetic, the choice depending on the judgment of the operator.

PRESENTATION AND DIFFICULTIES

Occipito-anterior positions make up 70 per cent of all vertex presentations. These presentations rarely require any interference, since they progress and terminate favorably. However, in some of these cases interference is indicated and becomes necessary. If no progress has been made one hour after the cervix has fully dilated forceps may be applied under ether anesthesia and labor terminated at will. Insufficient flexion is a frequent cause of this delayed progress, and some time should be allowed, in the judgment of the physician, before resorting to this interference, in the hope that such flexion will take place and satisfactory progress ensue. Should the head not be engaged after due time following dilatation, most authorities advise version and breech extraction instead of the use of high forceps.

Two to three out of every ten vertex presentations are occipitoposterior positions. It is admitted

that these posterior positions are the cause of more difficulties in the management of labor than all others. They are a real source of worry on the part of the physician, and call for active interference during the second stage of labor, instead of watchful waiting. During the first stage the dilatation is tedious, the head remains high up and fails to engage properly, and the pains seem ineffective. However, during this first stage the physician must be patient and allow enough time for full dilatation. In some cases it is advisable to carry out manual dilatation under anesthesia, when this stage is unduly prolonged. At this period the exact position of the head should be determined before any interference is attempted. When this has been definitely ascertained, a course of action must be decided upon. With dilatation complete and the head engaged promptly, but with arrest of progress, forceps should be applied and rotation carried out by the Scanzoni or modified Scanzoni method.

Scanzoni Method—Under anesthesia, forceps are applied, with the blades fitted to the sides of the head. It will be found that the blades do not fit quite right; they do not lock easily, and the handles do not close completely. The handles of the forceps are set at an angle, either to the right or the left on account of the posterior position of the head. In the right posterior position they will face to the mother's left groin; in the left posterior position they will face to the right groin. In the original Scanzoni method the handles are held firmly and traction with rotation is made at the same time. The handles of the forceps in this movement swing widely to the right or to the left, and the head, enclosed in the blades, descends and rotates to the anterior position under the pubic arch, while the forceps take an upside down position with the handles pointing downward. Some traction can be made in this latter position of the forceps, to fix the head until contractions become effective. The forceps may then be removed and if satisfactory progress continues, labor may be terminated spontaneously. If not the forceps are reapplied to the head which is now in an anterior position, and labor terminated at will. My own experience with these cases, carried out as above described has proved satisfactory and no serious difficulties have been encountered.

Modified Scanzoni Method—Dr. Arthur Holbrook Bill, of the Cleveland Maternity Clinic, has modified the above described method in one particular. Upon application of the forceps, rotation is immediately carried out, without traction, bringing the forceps into an upside down position and at the same time the occiput comes into anterior position. Removal and reapplication to the head follows and labor is terminated as before, at the will of the operator. This modified method has been used by Dr. Bill in hundreds of cases and seems to be preferable as it avoids traction when the head is in a posterior position, and for this reason, resisting progress. My own experience with the modification is limited, but it appeals to me because of the fact that less force in traction is necessary, and hence more desirable.

The above Scanzoni method with modification, is used in those cases in which the head *engages* in the brim of the pelvis. In those cases in which the head remains high up, free, and does not engage, internal podalic version is the method of choice, being preferable to the high forceps operation, which would otherwise be necessary.

Internal Podalic Version—Carried out under ether anesthesia, steps of procedure being:

1. With dilatation of the cervix complete, manual dilatation of the entire birth canal is recommended. This is the so-called ironing out process. It relaxes the muscles of the pelvic floor and avoids unnecessary delay in extraction.

2. Use a long rubber glove and if membranes are intact, rupture them high up near the location of the feet.

3. Bring both feet down together if possible, trying to prevent straddling of the cord and with the heels to the front.

4. After the extraction of the buttocks, favor anterior rotation of the back gradually.

5. The shoulders are delivered by a downward movement of the body, and at the same time the anterior shoulder should be brought under the pubic arch. The arms are delivered by hooking the finger in the bend of the elbow and by gentle traction bringing the forearm down in front of the face.

6. The head should be brought down in the oblique diameter and then rotated to the median line under the pubic arch, the body of the child being raised up over the abdomen of the mother.

7. Forceps should now be ready for application to the head if any delay is anticipated, but the majority of cases are delivered spontaneously by pressure from above on the head and gentle traction by means of the finger in the child's mouth. This last measure aids flexion of the head and delivery readily takes place as the body of the child is brought up over the abdomen of the mother.

Statistics from the Cleveland Maternity Hospi-

tal of a series of 514 cases of occipitoposterior positions delivered by the resident staff are as follows:

Spontaneous Rotation	148
Modified Scanzoni	267
Cesarean Section	18
Podalic Version	59
Manual Rotation	12
Fetal Mortality	3.1%

Statistics of a series of 500 consecutive occipitoposterior cases delivered personally by Dr. Bill are as follows:

Spontaneous Rotation	0
Modified Scanzoni	172
Cesarean Section	11
Podalic Version	317
Manual Dilatation	11
Voorhees Bag	11
Episiotomy	50
Fetal Mortality	1%

Forceps were not applied to the after-coming head in any of this series.

It will be noted in the second series that Dr. Bill advises and allows no time for spontaneous rotation when the cervix is fully dilated, but proceeds at once to carry out forceps application and Scanzoni method; or if the head is not engaged, version with breech extraction. Some exceptional cases call for cesarean section, because of an abnormal size of the pelvis, not because of the occipitoposterior position. I personally believe that following the stage of dilatation some time should be allowed for engagement of the head before active interference is undertaken.

Immediately following delivery massage of the uterus with one-half to one cc. of pituitrin, hypodermically has proved efficient and satisfactory. The placenta is expelled without undue delay being assisted by pressure downward on the uterus. Following the expulsion of the placenta, one cc. ampule of ergot given intramuscularly completes the treatment at that time.

SUMMARY

1. Modern treatment calls for prenatal observation and attention. The most important problem encountered during this time is eclampsia and this in connection with the preeclamptic condition requires prompt and effective measures.

2. The mother is entitled to relief from pain during the first as well as during the second stage of labor. Briefly enumerated safe and efficient anesthetics are—morphine and scopolamine, sodium amytal, nembutal; chloroform, ether and nitrous oxide administered during the pains in the later stages. Gwathmey technic is also used and has many advocates.

3. Spontaneous delivery is expected in occipitoanterior positions. If no progress has been made in one hour following full dilatation of the cervix, version with breech extraction is indicated, providing the head is not engaged. If the head is engaged forceps should be applied.

4. Treatment of occipitoposterior positions—

(a) With full dilatation and no engagement of the head, version and breech extraction is indicated. If the after-coming head is delayed, forceps may be used. Version is considered preferable to high forceps.

(b) With full dilatation and engagement of the head the Scanzoni method or the modified Scanzoni method is indicated, if delay follows:

5. Breech presentations: I have never considered breech presentations abnormal and have never made any attempt to change a breech into a vertex, for the simple reason that we change a difficult vertex presentation into a breech presentation. Any breech presentation may require application of forceps to the after-coming head but otherwise it presents no special difficulty.

6. Watchful waiting and the relief of pain is advised during the first stage of labor. Active interference early in the second stage is advised before the mother becomes worn out by a tedious period of delayed progress.

COMMENT

Use of Pituitrin. Although opinions differ, this valuable drug merits mention. Eminent authorities now condemn its use during the second stage of labor but advise its use immediately following the second stage for the expulsion of the placenta and the control of hemorrhage. Personally I believe that pituitrin is of use and has its place in the second stage of labor. I believe that it may be used with benefit in small doses, repeated if necessary in cases of uterine inertia, or when pains are weak and ineffective, or labor simply tedious, providing there is no mechanical obstruction or malposition. In my own experience I have seen no damage from such use.

Obstetric Forceps. The McLane-Tucker solid blade forceps seem to be most popular at the present time. The axis-traction device of Dr. Bill may be attached as necessary. The Piper forceps for use in applying to the after-coming head in breech extraction are the forceps of choice in this type of delivery. However, I believe these cases can be managed effectually with the ordinary type now possessed by physicians in general practice.

THE MALARIAL THERAPY OF NEUROSYPHILIS*

WILLIAM EDWARD ASH, M.D., Council Bluffs

The malarial treatment of neurosyphilis was originally thought of by Wagner von Jauregg[1] in 1877, but was first applied in nine cases of dementia paralytica in 1917. His results proved satisfactory and today this method of treatment is accepted throughout the civilized world. He did not conceive the malarial treatment of paresis as a fever or heat treatment, but as an infectious disease, having observed that mental patients improved or had favorable remissions after having undergone an intercurrent febrile disease. Since the advent of malarial therapy there have evolved groups of remedies which have in common the aim to produce an artificial pyrexia. Briefly enumerated, and of most importance, have been treatments with tuberculin, relapsing fever, sokodu (or rat bite fever), injections of milk, hydrotherapy, diathermy, injections of sulphurized oil, and typhoid vaccine. All of these have been suggested but relatively few of them have been carried out for any great length of time or in large enough series to confirm or deny claims of the respective authors. This has been done with the malarial treatment. There is already available a sufficiently large body of statistics to allow reliable opinion as to the value of malarial therapy in general paralysis.

In a general way, about one-third of the patients go into good remission, one-third into partial remission and one-third show no improvement. The mortality rate varies in different clinics from that of no mortality to that of 30 per cent. The average is about eight per cent. The once prevailing idea that malaria is a dangerous weapon deserves to be modified. Cases which are terminal and in a physically desperate condition are by no means suitable for malarial therapy.

THE MECHANISM OF MALARIAL THERAPY

The manner in which the reactive process influences the life of the spirochete and its toxic products, and the response of the nervous tissue is, as yet, hypothetical. Gerstmann[2] maintains that malarial therapy stimulates a rise of the weakened protective and defensive mechanism by the reinactivation of the cellular ability to inhibit the destructive action of the spirochete upon the nervous tissue. The Plaut and Steiner[3] theory is that the active immunity which is produced against the malarial infection is sufficient to produce also an inhibiting influence upon the growth and vitality of the spirochete.

Weichbrodt and Jahnel[4] have shown that with a rise in temperature in experimental animals they were able to heal an artificially produced chancre and cause disappearance of the spirochete. Since many cases show remissions without any fever, and others after malarial therapy show remissions, but without high fever, it may be argued that the fever therapy *per se* does not necessarily produce the desired effect.

The work of Bahr and Breutsch[5] is considered one of the most illuminating contributions to the mechanism of therapy. It is based on a histologic study of the brain and spinal cord of the patient who has had paresis. They examined the brains of patients who died before, during and after malarial treatment. They demonstrated that the improvement secured by this form of treatment was due to the stimulation of the reticuloendothelial system. The endothelial lining of the blood vessel, the lymphocytic cells in the perivascular lymph spaces, and the stellate cells were greatly increased in size and number. They became intensively phagocytic in action and destroyed the invading malarial parasites as food, the macrophagus enveloping one or two red blood cells containing malarial parasites in all stages of disintegration. It is assumed that the Spirochete pallida is consumed in the same manner, as it is difficult to find spirochetes in the brain following malarial treatment. Bahr and Breutsch believed that these phagocytic bodies were inactive at normal temperature, but became very active when the temperature was raised, the temperature being only an activating factor.

PROCEDURE

Only the benign tertian parasite should be used, as daily rigors are too debilitating. Transmission from donor to recipient is accomplished by a subcutaneous or intramuscular injection of two to three c.c. of citrated malarial whole blood. Citration is effected by drawing 0.5 c.c. of sodium citrate into the syringe before making the vena puncture. Intravenous inoculation may be used, but this method is not routinely advisable, since it apparently causes a more severe course of the malaria with a tendency to quotidian febrile patterns. The incubation period is also shortened and there is always danger of embolus occurring.

A course of eight paroxysms is considered sufficient. Patients were formerly allowed to undergo as many as twenty paroxysms; but, as Wagner von Jauregg has pointed out, a long, severe course of malaria is apt to defeat the aim of the treatment by so debilitating the patient that his recuperative powers are irreparably damaged. Good results have frequently been obtained with but

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three or four chills if the patient is in danger. At times it may be advisable to divide the treatment into two states, reinoculating a few months later. Frequently, the inoculation does not "take." Failure to "take" may be due to a variety of causes. The patient may enjoy an immunity to that particular strain of parasite; the failure may be due to hemolysis caused by the injection of an incompatible group; or the patient may be receiving an antimalarial drug.

The duration of the incubation period is extremely variable. It ranges from eight to sixteen days, the average being about twelve days. A four hourly chart should be kept from the moment of inoculation and a one hourly chart from the moment that a rise in temperature above normal is recorded. If this is not done it is easy to miss the true malarial peak.

CLINICAL COURSE

The typical malarial attack is preceded by a period of malaise in which the patient may exhibit nausea, vomiting, cyanosis, coldness of extremities, headache and neuralgic pains. The rigor varies from a few minutes to two and one-half hours. Some general paralytics have no subjective sensation of rigors, although the temperature may rise as high as 105 degrees. The normal ratio between temperature and pulse rate is preserved as a rule. Herpes labialis is a common complication. A slight degree of jaundice occurs in some cases. Enlargement of the spleen, shown by an increase in the area of splenic dullness, is found frequently, but the spleen returns to the normal size after cessation of the fever.

Physical Changes. During the course of the fever the patient tends to lose weight, but after its termination the weight usually increases with the mental improvement. The failure to gain weight lost during the febrile period is of bad prognostic import. The general and physical condition of the patient should be improved after the fever has terminated. The complexion becomes fresh and blooming, the digestion improves. On the neurologic side, the tremors of the face, hands and tongue diminish and frequently disappear. The speech and handwriting improve. In certain cases the pupillary light reflex is restored. Epileptiform attacks are generally reduced in number or are completely abolished.

Mental Changes. It must be borne in mind that certain mental changes occur during the course of naturally acquired malaria. Such changes are confusion, apathy, amnesia, agitation, insomnia and hallucinosis. In the artificially inoculated disease, any of these mental changes may complicate or cover the mental symptoms. When improvement occurs in the mental state the changes are very gratifying, but they may be so gradual as to require careful observation of their progress. A previously dirty patient becomes clean and self-respecting. A garrulous patient suddenly realizes that he has been talking nonsense. The memory improves, although for a long time after the fever there may be amnesia covering the acute stage of the fever. Insight is progressively restored so that a deluded patient begins to lose confidence in his own delusions and finally abandons them. If the delusions are of a quantitative nature, it is interesting to trace the gradual diminution of the figures. The mental improvement may make its appearance any time after the inoculation and be so great that eventually the patient gives the impression of enjoying an absolute normal mentality. However, in most instances, those who are going to show favorable results, undergo a decided mental change within six to eight weeks following the termination of their rigors.

PROVOCATIVE MEASURES

If temperature exceeds 106 degrees it should be relieved by tepid sponging. Occasionally, the tertian fever develops into the quotidian fever. In such cases it is often possible to convert the quotidian fever into a tertian type by the administration of three to five grains of quinine.

Termination of Fever. The fever should be terminated in extreme debility, serious cardiac conditions, or persistent pyrexia over 106 degrees. It has been experimentally shown that the proteins of the brain tissue coagulate when exposed to temperatures above this level. A drop of the systolic blood pressure to 90 degrees, or a secondary anemia to two million red blood cells, or considerable jaundice should also be occasions for terminating the fever. Sometimes fever ceases spontaneously after about a dozen rigors. Usually there is little difficulty in terminating the malaria by the administration of quinine sulphate, five grains, three times daily, for a period of three weeks.

Reinoculation. Those patients which have been benefitted by malarial fever and have relapses, should be submitted to a further course of treatment, as frequently further improvement may be anticipated.

Contraindications. As a rule it is useless to attempt malarial therapy in rapidly progressive so-called "galloping paresis" and in far advanced tabes with incontinence, or severe ataxia. These cases not only do not respond, but are apparently aggravated. The method is also disappointing in juvenile general paralysis and in primary optic

atrophy. It is unwise to attempt malarial therapy when there is a severe cachexia or when the neurosyphilis is complicated with systemic disease, such as diabetes, nephritis, hepatitis or clinically active tuberculosis. Aortitis and other heart lesions do not constitute contraindications unless there are signs of heart failure. In general, the patient must have latent powers of regeneration if there is to be a response.

Medical Aspects. In addition to general paralysis, tabes and cerebral syphilis are now being treated with malarial therapy as well as asymptomatic neurosyphilis and those cases involving the nervous system which show a definite resistance to active chemical therapy. Results obtained in these cases are comparable to those obtained in paresis. With the foregoing survey for general orientation, I should like to summarize in a general way the results of treatment.

RESULTS OF TREATMENT

In the past eight years I have treated a total of 178 cases with malarial therapy. All of these patients suffered from syphilis of the central nervous system. The majority were of the dementia paralytica type; forty of taboparesis, one of juvenile paresis, seven of meningo-vascular syhpilis, ten of tabes dorsalis and twelve of asymptomatic syphilis. The asymptomatic group is the most recent, the number having been treated during the past year and a half. Patients treated consist of 161 males and 8 females. The ages averaged from twenty-two to sixty-nine years. The age of the patient with juvenile paresis was twelve years. A complete physical examination was conducted in each instance and the individual was not accepted if he was greatly debilitated, or if he showed evidence of marked cardiac, renal, or vascular degeneration. A blood count, urinalysis and serologic examination of the blood and spinal fluid was made in each case. In a few instances the treatment was undertaken in poor physical risks with the realization of the possible dangers of the procedure. All but fourteen of the patients had received previous medication with the arsenicals, bismuth, mercury and tryparsamide.

In a general way, those cases of dementia paralytica which were recognized early in the course of the disease responded best to the treatment. The duration of the infection did not appear to be an important factor. In the expansive and the manic type, remissions were more prompt; the depressed type did not respond so favorably. The mental improvement was most noticeable during the first two or three weeks after the treatment. However, in many instances, improvement reached its peak eight or ten months later. Of the prognostic criteria, gain in weight is a *sine quo non* of a favorable outcome. Those patients that rapidly regained their weight showed the most marked improvement. In most instances, the cell count of the spinal fluid was first to show a change, returning within normal limits or slightly above the normal count. Early insight was also a good indication. In a few chronic cases, when the patients had marked mental deterioration, epileptic seizures, and were difficult to manage, there was a noticeable gain in weight, an absence of convulsive seizures, and the patients became more clean in their habits. In view of the type and character of the patients treated, it was difficult to make a reliable check-up on the serology of the spinal fluid. In two cases of general paralysis, I repeatedly had negative spinal fluid and blood Wassermann tests over a period of five years. In other cases studied, the Wassermann test and the spinal fluid test was modified and not in keeping with clinical improvement. Three deaths occurred in my experience, directly the result of malaria. Two patients died of an extreme jaundice and anemia, and the other patient from acute exhaustion. The physical improvements noted were absence of tremor, speech, pupillary changes and lessening of the hyperactive reflexes. The remissions were in keeping with those of most observers, approximately 50 per cent of the patients showing decided improvement and approximately 25 per cent showing complete remissions. Those cases with taboparesis, as a group, did not show the response of the paretic type. Improvement in that class, when noted, was more gradual and the percentage of remissions less.

The patient with juvenile paresis, who was of the dementia type, did not show any improvement but is still living and the progress is apparently arrested. The cases of meningo-vascular syphilis comprising acute psychosis, cranial nerve palsy, one hemiplegia, and convulsive phenomena all showed good remissions. The duration of the infection in this type was of a shorter period, varying from two months to two years. Four patients had not received any previous chemical therapy. In most instances, the pleocytosis was higher than in other forms of neurosyphilis.

In the ten cases of tabes dorsalis the results were not so promising. Three patients were made worse by the treatment, but after several months, symptoms remained stationary and active progress is apparently arrested. There were optic nerve changes in four patients, and no improvement was noted after several months had elapsed. This is in keeping with most observations; that any form of tabetic optic atrophy is resistant to any form

of treatment. In the asymptomatic group, studied during the past year and a half, a total of twelve patients have received the malarial therapy. Nine of the patients had received intensive antisyphilitic treatment with arsphenamine and bismuth, but in no instance had tryparsamide been given. The symptoms were recognized as positive or changeable Wassermann reactions, headaches, fatigue and general physical or neurasthenic complaints. The only neurologic signs were positive findings in the spinal fluid, increased cell count, globulin, a positive Wassermann reaction, colloidal gold curves suggesting the paretic or luetic zones. In all cases of this type improvement was prompt, and there was a gain in weight and general well being. In four cases, after one year, there was a complete reversal of the serology of the spinal fluid and of the blood Wassermann reaction. In the others there was a noticeable improvement in the laboratory findings. O'Leary[6], of the Rochester Clinic, in a recent report on his observation of the treatment of asymptomatic neurosyphilis with malaria stated that 34 per cent showed complete remissions.

In my early experience with malarial therapy, I did not follow the treatment with any clinical therapy as was advocated at that time, and in spite of this attitude, the patients continued to remain in good remission. I now urge all patients to receive arsenic or bismuth within six months after the course of malaria, because observations have shown that although the progress has been arrested, other manifestations of syphilis in the viscera may become aggravated. It also helps in the reversal of spinal fluid findings. Tryparsamide should be a routine measure over a long period of time following fever therapy. It should also be the treatment of choice in those cases not suitable risks for pyrexia.

Solomon and Epstein[7] have recently differentiated the therapeutic effect of arsphenamine and tryparsamide. They pointed out that arsphenamine is a potent spirocheticide, both in vitro and in vivo, while tryparsamide has very little effect on the Spirochete pallida as it exists in the early stages of syphilis. Arsphenamine has a low index of efficiency after the spirochetes are well established in the nervous system; tryparsamide has a marked therapeutic effect on syphilis of the central nervous system. Arsphenamine is a definite, clear-cut plasmodial agent, clearing the blood stream promptly of malaria; tryparsamide, on the other hand, neither controls fever nor has any obvious plasmodial effect. Arsenic is both a spirocheticidal and plasmodial agent. Tryparsamide does not have a direct lethal effect on the Spirochete pallida. The beneficial action of tryparsamide on syphilis of the central nervous system is not known. It is assumed that it probably has a local beneficial effect within areas of the nervous system.

CONCLUSION

From my experience with various phases of neurosyphilis, I do not agree that it is always wise to treat patients with tryparsamide and other remedies first. If malarial treatment will do what we expect it to do, we should not wait a year before giving patients the benefit, as long as they can be hospitalized, properly protected, and given additional chemical therapy. I believe also that malarial therapy should be instituted in the treatment of those cases that are resistant to chemical therapy after a reasonable length of time. The time to treat syphilis of the nervous system is before it gets imbedded into the tissue. A prophylactic attitude of checking spinal fluid should be a routine practice by syphilologists, since it has been shown that the central nervous system is frequently involved early in the course of the infection which predisposes the individual to a potential parenchymatous syphilis or other forms of neurosyphilis.

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Discussion

Dr. Leonard P. Ristine, Cherokee: I would like to commend Dr. Ash for summarizing so well a subject which in recent years has become of some importance to the profession. I think practically all physicians, both general practitioners and specialists, will see from time to time a case which is neurosyphilitic in some respect. For that reason, I believe that they should consider well the remarks of Dr. Ash.

Because of the fact that malarial therapy has now gained a definite standing in the treatment of neurosyphilis, I think the profession here might be interested in knowing how we feel about it in state hospital practice.

Our results in a smaller series of cases than that reported on by Dr. Ash coincide very closely with those of the larger series; that is, about one-third good remissions, one-third incomplete remissions, and one-third in which we see little or no improvement.

I think it is of some importance to recall at this time that the recruiting ground of neurosyphilis is in the early stages of syphilis, even the primary stage, and that the profession as a whole, if they are to do

anything toward the solution of the neurosyphilitic problem, must do it in pursuing as completely as possible their study and therapy of the early syphilitic case that has its beginnings in the basilar meningitic changes.

I do not think that a man in practice could be expected to use a great deal of malarial therapy. A great many of them would not feel safe in using tryparsamide, but since neurosyphilis as a whole is not the hopeless proposition that it was a few years ago, I believe they should recommend that these cases receive either tryparsamide or malarial therapy or both. I do not think it is worth while quibbling about which is the better treatment; the results are comparable in both forms of treatment now. For instance, Solomon and Epstein are using combinations of the two. They treat a patient with tryparsamide until his general physical condition has improved, and then they institute their malarial therapy. Others begin their treatment with malarial therapy, and improve the patient's physical condition afterward, by giving tryparsamide.

I would like again to commend Dr. Ash's good paper.

THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCE

INTRACRANIAL HEMORRHAGE AND BIRTH INJURIES OF THE NEW-BORN

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The case to be presented this morning is that of the unexpected death of an infant born after a normal delivery. We have had five similar cases of intracranial hemorrhage of the new-born in a total of thirty necropsies on infants (16 per cent), and since these hemorrhages and the associated brain injury are recognized as frequent causes of death in the new-born, and as they have been the subject of considerable study in recent years, a summary of the literature seems advisable.

CASE REPORT

The mother, a white woman, thirty-four years of age, was admitted to The Finley Hospital, January 20, 1933, because of labor pain.

Past History: The patient stated that she had always been well except for an occasional cold. She has three children living and well. The first child is eleven years old and was born after a normal pregnancy and labor. Two other children were born after precipitate labors and before the medical attendants arrived. She has had three miscarriages. The blood Wassermann test was negative. She was not troubled by headaches or vomiting during the present pregnancy.

Family History: Negative.

Physical Examination: The patient was a well developed woman who had been in labor for two hours. The general physical examination showed the heart, lungs and extremities to be normal. Her pelvic measurements were, intercristal diameter 28 cm., between the great trochanters 32 cm., sacropubic 11 cm. Abdominal examination showed the fetus to be in the right occipito-anterior position. The fetal heart sounds were of normal character. A rectal examination showed the cervix to be dilated two fingers' breadth.

Course of Labor: Labor progressed rather slowly but evenly until about ten minutes before delivery, when the labor pains suddenly became very severe and were not controlled by the anesthetic (ether). After five hours of labor she was delivered of a male child. The baby was very pale, limp, and did not breathe, but the heart sounds seemed normal. Gentle attempts at resuscitation failed to induce respirations though the heart continued to beat for ten minutes and the color was restored.

Clinical Diagnosis: Undetermined.

Necropsy: Postmortem examination was made two hours after death. There was a well marked caput succedaneum and the scrotum was markedly edematous. Hemorrhages were found external to and beneath the dura. It was estimated that the subdural hemorrhage equalled 100 cc. of unclotted blood. A small tear of the tentorium was also found. Otherwise the viscera showed only acute congestion and slight atelectasis of the lungs.

Anatomic Diagnosis: Laceration of the tentorium; extradural and subdural hemorrhages; caput succedaneum with edema of the scalp; atelectasis of the lungs; acute congestion of all the viscera; edema of the scrotum.

REVIEW OF THE LITERATURE

Incidence: Autopsy studies by several investigators show that approximately one-half of all infants, either still-born or dying within the first few days of life, have lacerations of the dura mater and especially of the tentorium. While they are not necessarily the cause of death, the resulting hemorrhage or brain injuries frequently do cause death. Holland found tears of the dura in 81 of 167 fetuses, and in 64 of them there were bilateral lacerations of the tentorium. In a more recent investigation made under the auspices of the Medical Research Council of the British Empire, Holland and Lane-Claypon reported tentorial tears in one-half of all cases in which forceps had been applied, with essentially the same frequency in spontaneous breech labors, and they were found in just one-fourth of all autopsied cases. From a study of 160 cases of natal and neonatal death, Tingle concluded that more fetuses die as the result of excessive trauma during delivery than from maternal or fetal diseases. Guenther analyzed 4,000 deliveries with a still-birth mortality of 4.1 per cent to which must be

added another: 1.6 per cent of early postnatal mortality. He found that it was impossible to express in exact percentages, the relation of birth trauma to infantile mortality, but it would seem that such injuries would represent the direct cause of death in approximately one-third of the cases.

Adair of the Chicago Lying-in Hospital reported that in a series of 961 cases, the largest single cause of death was birth trauma. Three hundred (31.2 per cent) of the deaths were assigned to this cause and if the ante partum fetal deaths were excluded there remained 718 intrapartum and postpartum deaths, which raised the percentage of traumatic deaths to 41.8 among the fetuses which were alive at the onset of labor. It is only fair to remark that in 105 cases the evidence of birth trauma was not absolute and that 151 of the cases were premature. If one considers the term cases alone there was a percentage incidence of definite and probable birth trauma of 39.7 and a definite diagnosis in 31 per cent. The oversized or postmature infants gave a somewhat higher incidence. It is important to note that of the 300 cases assigned to birth trauma as the cause of death such a clinical diagnosis was given in only four. It is also of interest to observe that of 39 cases which were clinically diagnosed as asphyxia, 22 (56 per cent) were assigned to the birth trauma group as the result of findings at autopsy.

Etiology: The character and duration of labor, the fetal position and the type of delivery must be considered as possible etiologic factors. In Adair's series the incidence of birth trauma was highest when the membranes ruptured at the onset of labor (61.9 per cent) and during the first stage (46 per cent). In 109 cases of placenta praevia and abruptio placentae, birth trauma was the probable cause of death in 31 (28.5 per cent) and suffocation and aspiration in 47 cases (43.1 per cent). The fetal position and duration of labor were of undoubted importance. The occiput posterior positions showed the highest percentage of cases with long labors. Intrapartum deaths also increased with prolonged labor. The percentage incidence of traumatic deaths increased with lengthened first and second stages of labor. The incidence of fetal positions other than cephalic was relatively high, as there were 157 breech cases (17.9 per cent) and 24 cross presentations (2.7 per cent). The highest percentage of trauma was in the breech and transverse positions. There is a definite relationship between the type of delivery and birth trauma, since 26 per cent of the spontaneous deliveries, 47.3 per cent of those delivered by instruments and 58.9 per cent of breech extraction and versions, showed birth trauma. Evidence of trauma was also found in a high percentage of those infants who were delivered by cesarean section.

The problem of intracranial stress as the result of changes in the shape of the skull during the process of molding is most lucidly presented by Holland. He supports the opinion of former investigators that compression of the head raises the vault of the cranium and with it the falx, causing the falx itself or the tentorium to tear when overstretched. It is the inevitable, exaggerated compression of the skull in face and brow presentations and its rapid compression in the delivery of the after-coming head in breech labors, which account for the high percentage of lacerations and hemorrhages among infants delivered by these methods.

Schwartz has described certain changes which occur as the result of rupture of the membranes. He states: "As long as the membranes are intact, any increase of intra-uterine pressure, caused by the uterine contractions, is equally distributed in accord with the laws of hydraulics. Rupture of the membranes and dilation of the cervix bring a significant alteration of conditions. Within the area of the dilated cervix the presenting part of the head is now exposed to the lower outer atmospheric pressure. In this region, therefore, neutralizing counterpressure is missing. Particularly later in labor, with wider dilation of the cervix and increased intra-uterine pressure by the added force of voluntary muscles, a very marked difference between the inner and outer pressures (approximately 27 kg.) is created. Under the influence of this overpressure the fluid contents of the fetal body, especially lymph and blood, are pressed towards the area of lower compression, or expressing this phenomenon in its negative phase, the zone of lower pressure actually exerts a suction effect. Under its influence develops the caput succedaneum, or under certain conditions a cephalematoma. Obviously this combination of overpressure with suction will produce some effect as well on the contents of the skull. Smaller veins in the meninges and within the brain and venous sinuses may become overfilled and may eventually rupture under the influence of mechanical factors resulting from the molding process."

Certain mechanical factors are also important from an etiologic standpoint. In short, violent labors, uterine contractions thrust the head into the parturient canal against the soft parts and the bony pelvis with a violence which drives the fetus through the canal rapidly. This type of case is not usually accompanied by head molding, but is undoubtedly associated with alternating compression and decompression of the fetal head, result-

ing in marked changes within the cranial cavity which may provoke edema, hemorrhage and laceration of the dural membranes. Depression of the occipital bone may also result in intracranial injury. This may occur with cephalic, especially occipital presentations, where the occiput has rotated to an anterior position as it usually does. It is produced by resistance of the pelvic floor which maintains the head in flexion and crowds it under the pubic arch. Where the pelvic outlet is small with a relatively short anteroposterior diameter, or where the perineum is unusually resistant, the head may be held under the pubic arch with unusual force, especially at the acme of labor pains. This force may in some cases be sufficient to contribute to intracranial damage. This depression of the occipital bone produces tenseness and traction on the falx and tentorium and may result in lacerations of these structures and of the blood vessels causing hemorrhage as well as undoubted injury of the brain cells.

Injuries are also definitely associated with artificial delivery, although one must not forget that many of them occur in connection with spontaneous labors; usually those which are short and violent or those which are unduly prolonged in either the first or second stage, but more particularly in the latter. Injuries occur in all varieties of cephalic positions and presentations, but are naturally more common in those which tend to produce a hard and long labor. They also occur in transverse positions, breech deliveries, versions and extractions. In transverse positions, which are usually terminated by version and extraction, the after-coming head is usually damaged as it is drawn through the parturient canal. The same factor enters into the production of injuries in breech deliveries with extraction. Instrumental deliveries, while at times unnecessarily blamed for intracranial damage which has antedated the application of forceps, are frequently productive of harm. As might be expected the frequency and severity of intracranial damage in instrumental deliveries depends not only upon the skill of the operator but also upon the position and height of the head when the forceps are applied. Low forceps deliveries are productive of less intracranial damage than those where the head occupies the higher level. Lateral compression of the head in the biparietal diameter apparently does not cause as much damage as forceps application in other cephalic diameters. Instrumental deliveries are not infrequently associated with fractures of the cranial bones, which may be accompanied by lacerations of the dural membrane, edema and intracranial hemorrhage. Fracture of the cranial bones also follows extraction in breech deliveries and version.

Pathology: Within the range of physiologic natal traumatization should be placed all those anatomic observations and immediate clinical manifestations which in general express a sort of contusion or concussion of the brain. They disappear, as a rule, within a very short time. As a matter of fact, they are discovered only by an examination which is more thorough than that customarily bestowed on the new-born infant by the attending obstetrician. Such minimal trauma is very unlikely to have later consequences. The more severe injury, if not causing immediate death, becomes the source of a group of quite different symptoms that are more obvious, and with the ever increasing interest of the profession in this problem, now but rarely overlooked. These symptoms are caused by hemorrhage and injury to nerve tissue, and if resorption and restitution are not complete later consequences may well be expected.

Tentorial tears are signs, not so much of excessive force as of the fact that this force has been exerted in a particularly unfavorable direction. Therefore, serious dural injuries might be looked for if an extraction is done at a time when the position of the head precludes entirely appropriate application of the forceps. Extreme change in the configuration of the fetal head inevitably places certain dural folds under undue strain and may cause them to tear. It might be emphasized in this connection that the actual harm done by such a tear is determined solely by whether the tear incidentally involves any smaller or large vessels. Engorged veins or sinuses naturally will be ruptured more easily than empty ones. A delay in blood coagulation will permit a slight oozing from a small vessel to continue until finally it amounts to a very serious if not fatal hemorrhage.

Prophylaxis: Nothing should be done to hasten or shorten a labor which seemingly is progressing normally. This is particularly true in a premature labor. The obstacle offered by a rigid perineum can be overcome by an episiotomy. If, in the course of a normal labor, intervention either by medication or by instrumentation seems desirable in the interest of the child, the probability of increased risk to the child through such intervention should be properly weighed. Beyond any doubt, the majority of all obstetric operations are undertaken presumably in the interests of the child. All these operations, however, imply a definite danger to the infant. Undue haste in the extraction of the head, and especially of the after-coming head in a breech labor, undoubtedly implies a risk to the fetus which in general is greater than the risk that hasty intervention intends to overcome. Fatal dural lacerations have been recorded even in cesarean sections from extraction of the

head through too small a uterine or abdominal incision. The most common justification for extraction with forceps is the assumption or diagnosis of beginning intra-uterine asphyxiation. As a matter of fact, with the exception of the relatively rare instances of placenta praevia, abruptio placentae, prolapsed cord, or profound toxemia, this diagnosis can hardly ever be made with any certainty. Even marked changes in the fetal heart rate or the passage of meconium are only of very limited value in this respect. Apparently the ominous retardation of the heart beat is the result of undue compression of the head. Forceps applied under such conditions will actually reduce the chances of the fetus if extraction causes a further or quicker compression of the head. Irregularity and disquieting retardation of fetal heart sounds often yield promptly to the administration of chloroform, ether, or nitrous oxide gas in small amounts. That is, just enough to stop, temporarily, the uterine activity and thus relieve the excessive compression of the head. The administration of anesthetics in this manner proves therefore doubly valuable in the prevention of serious intracranial injury; the heart action often improves promptly, while sufficient time may be gained to permit the application of the forceps later under improved conditions.

These are only some general rules of prophylaxis evolved from basic facts. They must guide the obstetrician in dealing with the specific problems of the individual case. They must be taken into account by him if he wishes to safeguard the fetus when selecting the type of and the proper time for any obstetric intervention. However, serious injuries responsible for immediate death or later disability are not inflicted solely during labor itself. In many instances severe harm results from improper management of the infant who is only physiologically or slightly traumatized. Therefore only the very gentlest maneuvers must be employed in its resuscitation.

Diagnosis: Every baby who does not breathe properly should be considered as probably an intracranially traumatized baby. Ehrenfest of St. Louis stated that between 70 and 80 per cent of the stillborn babies or those who die shortly after birth seemingly as the result of asphyxiation, actually die of intracranial lesions. He also reported that 35 per cent of all babies born after normal labor show nystagmus and that the incidence of this anomaly rises to nearly 80 per cent of the first born and to 100 per cent in those with abnormal presentations. Yagi classifies the birth trauma cases into two groups: (1) excited motility, or "erethic form" with cyanosis, restlessness, vomiting, difficulty in swallowing, irregular respiration, tense and pulsating fontanel, twitching of the face or extremities, general convulsions, and perhaps opisthotonus and rigidity of the neck; and (2) paralyzed motility, or "torpid form" with cyanosis, inability to nurse, feeble pulse, hypothermia and sleepiness. These patients usually die in two or three days. Those with the "erethic form" may recover or may pass into the "torpid form." If the above signs are kept clearly in mind a probable diagnosis can be made in all cases. Above all the baby who does not breathe properly should be considered as a traumatized baby rather than an asphyxiated one and treated accordingly.

Treatment: Every traumatized baby should be handled with the greatest gentleness. No violent attempts should be made to make it breathe. Every infant showing cyanosis or respiratory disturbance should be placed in an oxygen tent or a Drinker respirator. Kugelmass believes that cisternal puncture is indicated immediately after birth in infants suffering from asphyxia or other conditions indicative of increased intracranial pressure. This may be repeated daily if necessary. Immediately after resuscitation, 15 cc. of whole blood should be injected into each buttock; the injection should be repeated daily until both clotting time and bleeding time have been reduced to five minutes. To combat shock and to supply fluid and nutriment, a solution of 3 per cent gelatin, 5 per cent dextrose and 0.5 per cent sodium chloride should be given every hour by a Breck feeder. The gelatin also serves to reduce the clotting time. After the second day a thick milk feeding, made up of 12 ounces of evaporated milk, 18 ounces of water and 3 ounces of barley flour, may be given every four hours. All unnecessary handling must be avoided. One grain of sodium amytal in aqueous solution, or 1 ounce of 1 per cent magnesium sulphate may be given by rectum when convulsions are not controlled by spinal drainage. In some cases the skull may be opened and the dura mater incised, thus releasing pressure and blood. The mortality is necessarily high but the procedure seems practical where other methods fail to relieve the symptoms.

Conclusions: Dural and tentorial tears with accompanying trauma to the brain is the most frequent cause of death in infants born dead or dying shortly after birth. Prolonged, difficult or precipitate labors, especially those with abnormal presentations are potent causes of intracranial trauma in the new-born. Every physician should anticipate these injuries in such cases and, having made a diagnosis, institute treatment at once. It is especially important that the intracranially traumatized infant should not be treated for asphyxiation.

STATE DEPARTMENT OF HEALTH

Walter L. Bierring

HEALTH EDUCATION

The gospel of health and the causation of disease should be within the knowledge of every citizen of Iowa. To make this information available is the responsibility and duty of the medical profession. Other agencies in and outside the state have rendered valuable aid in the past, but the time has arrived when organized medicine through state and county medical societies must assume the lead and direct all projects for child health protection, and programs of general health education.

The State Department of Health offers the fullest cooperation and has proposed a plan that has been endorsed by the Council, by which through integration with the Committee on Child Health and Protection and the Speakers Bureau of the Iowa State Medical Society in conjunction with the county medical societies, the greatest unity of action is assured. The county medical society thus becomes the unit for all forms of medical relief and educational guidance in its particular community.

The Speakers Bureau is developing a remarkable plan to bring the advances of modern medicine to the members of the State Society through graduate courses and continued education, but the medical profession will be remiss in its duty to the public if it does not translate this knowledge into action for the immediate needs of their respective communities.

The primary effort in this public health movement will be directed in the interest of the expectant mother, the preschool and the school child. At the same time every influence will be enlisted through the collection of statistical data and distribution of informative publications on such conditions as diabetes, heart disease, and cancer, for the purpose of better control and possible prevention of these conditions.

This is a challenge to organized medicine and offers a distinct opportunity to the trained physician of today to take his rightful place in the promotion of the proper type of public health education and the prevention of disease.

WALTER L. BIERRING, M.D.

HUNGRY FOR HEALTH FACTS

The laity hungers for authoritative information on health subjects. The desire to obtain 15,000 pieces of literature was indicated by 1,034 State Fair visitors to the exhibit of the State Department of Health. Requests were received from persons residing in 84 of the 99 Iowa counties and from 17 states other than Iowa. No requests were received from persons located in Lyon, Osceola, Dickinson, Howard, Winneshiek, Allamakee, Chickasaw, Palo Alto, Clay, O'Brien, Cherokee, Bremer, Dubuque, Buchanan and Ida Counties. Persons living in Polk County and the eight counties contiguous to it, signed 549 or 53.1 per cent of all the requests received. The out-of-state requests comprised one each from Arizona, Arkansas, New Mexico, Ohio, Tennessee, Washington, Oklahoma and Michigan; two each from New York, Kansas, Minnesota, South Dakota, Wisconsin and New Jersey; three from Nebraska; four from Illinois and eight from Missouri.

The 53 publications available were listed on the request blank under five headings; namely, communicable diseases, child hygiene, sanitation, sex hygiene and miscellaneous. The desire to obtain all of these publications was indicated by 142 persons. The classes of literature signed for were in order of frequency, respectively, sex hygiene, communicable diseases, child hygiene, miscellaneous and sanitation. More than 350 requests were received for each of the publications, "Sex Education in the Home," "Accidents and First Aid," "Wonderful Story of Life," "Healthy Happy Womanhood," "The Child From One to Six," "The Parents' Part," "Management of Diseases in the Home," "Sex Education in the School," "Man Power," and "Control of Communicable Diseases" (a chart). Not a single sex education publication available through the department failed to gain a place among these ten most popular publications. Of the remaining 43 publications listed on the request blank, each of 21 was asked for by 242 to 336 individuals; each of 15 was requested by 196 to 231 persons and each of seven was applied for by 160 to 191 visitors.

J. H. KINNAMAN, M.D.

STATE SOCIETY COOPERATES

The Council of the Iowa State Medical Society approved the plan and policies of the Division of Child Health and Health Education of the Department of Health on September 15, 1933. The Committee on Child Health and Protection and the Speakers Bureau of the Iowa State Medical Society will serve in a liaison capacity between that society and the department of health. At the present time the membership of the Committee on Child Health and

Protection is reviewing the publications available through the division for the purpose of determining which publications shall be distributed and how they shall be distributed. At a later date detailed information concerning the plan and policies of this division will be printed in the Journal of the Iowa State Medical Society.

EPIDEMIC ENCEPHALITIS IN IOWA

In view of the fact that current thought has been directed to the increased prevalence in certain areas of epidemic encephalitis during August and September, it seems well to present data relative to past and recent morbidity and mortality reports from this disease in Iowa. The following table represents information taken from death certificates of the Iowa State Department of Health, for the five years from 1928 to 1932 inclusive, and arranged according to sex and age groups.

DEATHS IN IOWA ATTRIBUTED TO ENCEPHALITIS LETHARIGCA, 1928-1932.

	Male		Female		Total	
Age Groups	No. of Cases	Per Cent	No. of Cases	Per Cent	No. of Cases	Per Cent
Under 1 yr.	2	2.2	5	5.7	7	3.9
1 to 4 yrs.	10	11.1	10	11.4	20	11.2
5 to 9 yrs.	8	8.9	6	6.8	14	7.9
10 to 19 yrs.	6	6.7	7	7.9	13	7.3
20 to 29 yrs.	3	3.3	7	7.9	10	5.6
30 to 39 yrs.	10	11.1	11	12.5	21	11.8
40 to 49 yrs.	12	13.3	10	11.4	22	12.4
50 to 59 yrs.	19	21.1	8	9.1	27	15.1
60 to 69 yrs.	14	15.6	16	18.2	30	16.9
70 to 79 yrs.	6	6.7	5	5.7	11	6.2
80 yrs. and over	0	0.0	3	3.4	3	1.7
Totals	90	100.0	88	100.0	178	100.0

The above table shows that males are susceptible to about the same degree as females; that 30.3 per cent of the deaths occurred in persons 1-19, 17.4 per cent in individuals 20-39, 27.5 per cent in people 40 to 59 and 24.8 per cent in those 60 years old or older.

Seasonal Distribution of Deaths

During the five year period under discussion, 65 or 36.5 per cent of the deaths occurred during January, February and March; 46 or 25.8 per cent during April, May and June; 37 or 20.8 per cent in July, August and September; and 30 or 16.9 per cent in October, November and December.

Deaths occurred in 64 of the 99 counties of the state.

Mortality From Epidemic Encephalitis Since 1923

Mortality statistics of the Department of Commerce in Washington, D. C., record the following number of deaths in Iowa due to encephalitis lethargica, for the decade 1923 to 1932:

Year	Number of Deaths
1923	28
1924	18
1925	28
1926	26
1927	16
1928	28
1929	31
1930	31
1931	31
1932	26
Total	263

For the first six months of 1933, records of 13 deaths due to this cause, reached the Division of Vital Statistics of the State Department of Health.

Morbidity Reports of Epidemic Encephalitis

Although mortality records for the decade 1923-1932 show an average of 26 deaths annually, morbidity reports for the period since 1928 have been woefully incomplete. In 1928 no cases were reported, in 1929 reports of two cases were received by the State Department of Health; in 1930 reports of three cases, in 1931 reports of two cases, and in 1932 reports of seven cases were received.

Thus far in 1933, 27 cases of epidemic encephalitis have been reported. Three cases occurred in January, February and March, the remainder in August and September. For the most part, these cases have been widely scattered, reports coming from the following counties: Adams, four; Pottawattamie, three; Scott, two; Woodbury, three; and one each from Clarke, Clayton, Fayette, Franklin, Henry, Ida, Jasper, Johnson, Jones, Lee, Mills, Muscatine, Plymouth, Ringgold and Wapello.

Estimating the mortality rate at 20 per cent, the number of cases reported should exceed by several times, the annual number of deaths. It is hoped that reporting may be as complete as possible, so that morbidity records will be more accurate and there will be more information available regarding the nature and mode of dissemination of this disease.

Regulations Applicable to Epidemic Encephalitis

It is assumed, as with poliomyelitis, that the virus is spread through the respiratory discharges of those infected. Homes concerned should be placarded and the patient isolated for a minimum period of twenty-one days. Disinfection is indicated, particularly of the respiratory and other abnormal body discharges. Undue prevalence of the disease this year during the warmer months has again directed attention to the possibility of insect transmission. Although an insect vector has not been demonstrated, homes should be adequately screened to exclude flies and mosquitoes.

Data Through Case Records

Are the cases which have been reported recently like those of past years, or do they resemble more closely the clinical picture associated with the outbreak in the St. Louis area? Case record forms and letters requesting more detailed information relating to those suffering from epidemic encephalitis, are being forwarded to attending physicians and health officers. In this way it will be possible to gather significant data, which should lead to clearer knowledge of this disease.

Carl F. Jordan, M.D., C.P.H.

PREVALENCE OF DISEASE

	Aug. '33	July '33	Aug. '32	Most Cases Reported From
Diphtheria	30	21	28	Polk, Carroll
Scarlet Fever	47	42	35	Polk, Clarke
Typhoid Fever	17	5	35	Fayette, Black Hawk
Smallpox	3	11	16	Dubuque
Measles	0	29	4	
Whooping Cough	126	192	53	Scott, Boone
Cerebrospinal Meningitis	2	4	1	Polk, Woodbury
Chickenpox	10	29	7	Boone, Woodbury
Mumps	18	46	14	Johnson
Poliomyelitis	8	1	8	Hardin, Woodbury
Tuberculosis	44	47	56	(For State)
Undulant Fever	15	23	15	Pottawattamie
Syphilis	218	176	304	(For State)
Gonorrhea	193	228	312	(For State)

The following members of the administrative staff were inadvertently omitted in the announcement in the September Journal:

Miss Maude E. Sutton, Director of Nursing Education

Miss Edith S. Countryman, Director of Public Health Nursing

Mr. Robert L. McLaren, Director of Vital Statistics.

The Sixty-second Annual Meeting of the American Public Health Association will be held in Indianapolis, Indiana, October 9-12. Representatives of the department who will attend this meeting have been named by the Commissioner of Health.

A Child Health Recovery Conference has been called by Secretary of Labor, Francis Perkins. Representatives of state departments of health, medical societies and national organizations concerned with public health and social welfare are to meet in Washington on October 6, 1933, to discuss malnutrition. Walter L. Bierring, M.D., Commissioner of Health and President Elect of the American Medical Association will attend this conference as a representative of the American Medical Association. Joseph H. Kinnaman, M.D., Director of Child Health and Health Education will represent the Iowa State Department of Health.

ANNUAL MEDICAL CLINIC
COLLEGE OF MEDICINE
THE STATE UNIVERSITY OF IOWA
IOWA CITY

November 3-4, 1933

Dr. Walter L. Bierring, President Elect of the American Medical Association, will be the speaker following the dinner on the evening of Friday, November 3.

LIMITATION OF MALPRACTICE DEFENSE

The Medicolegal Committee of the Iowa State Medical Society has recently had its attention called to a clause in the malpractice policies issued by two of the companies writing such insurance, stating that the company will not pay any judgments obtained against its policyholders unless their defense has been conducted by the company. For example, if a member of our society, who is covered by commercial malpractice insurance, insists on the society conducting his defense, we are obligated to do so, but in the event that a judgment is obtained against him, he is in a bad situation because we do not pay for anything except his defense, and the insurance companies state that they will not pay any judgments unless the defense has been conducted by them.

This warning is published because a lack of the knowledge thus imparted might cause some of our members serious trouble.

Frank A. Ely, M.D., Chairman,
Medicolegal Committee.

SURVEY OF RESEARCH ON THE GONOCOCCUS

A Committee for Survey of Research on the Gonococcus and Gonococcal Infections has been formed by the Division of Medical Sciences of the National Research Council, in cooperation with the American Social Hygiene Association. Its purpose is to collect, analyze, and collate the facts already established and the efforts now in progress to add to knowledge of the gonococcus and gonococcal infections, especially as regards bacteriology, pathology, immunity, mechanism of infection, and some of the forms of therapy. Attention will be concentrated chiefly on work done in the United States. At the close of the preliminary survey the committee, with the assistance of a conference of experts, will compile a report with the object of stimulating interest in the study of the gonococcus, of providing a point of departure and of suggesting promising leads for further investigation. The survey will cover the literature, but it is hoped that unpublished work, and studies which were incomplete or whose results were inconclusive, may also be included.

Dr. Stanhope Bayne-Jones, Chairman, earnestly invites the cooperation of workers interested in this field. Other members of the committee are Dr. Edward L. Keyes, Dr. Walter Clarke, Secretary, and Dr. Francis Blake, Chairman of the Division, ex-officio. Headquarters have been established at Room 1101, 450 Seventh Avenue, New York City, where any communications and reprints will be welcomed.

The JOURNAL of the Iowa State Medical Society
ISSUED MONTHLY

Ralph R. Simmons, Editor.....Des Moines

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REFLECTED VALUES

In the daily pursuit of the elusive dollar, one often loses sight of his dependence upon his fellow man. Our individual efforts tend to minimize the group force and permit one to feel truly that "every man's destiny lies within him." However, if we meditate upon our successes and achievements, we are invariably faced with the all too patent fact that much of our personal glory is a reflected glory, or at least one furthered by the ministrations of friends. No matter how far upon the highway of success one has traveled he has not traveled alone. He is surrounded by his friends and his attainments are great only when compared with the group.

A physician is just as dependent upon his group as any man. He inherits the honor and prestige won by a long line of illustrious pioneers in the healing arts. He begins his practice where they left off. He shares the honors and esteem of his predecessors in his chosen locality and even his competitors add to his glory either by contrast or comparison. Nevertheless, he is dependent upon the labors of others to further him with scientific knowledge and to explore the mysteries of new and baffling diseases. His literature, his clinics, and his inspirations in medical advancement are all furnished by colleagues. Even his protection from unscrupulous practitioners is a group activity.

During the past two years some physicians have felt that they could divorce themselves from the organized group and live apart. Like an infant left to grow without the contacts with others of the human family, such a physician is destined to abysmal solitude and primitiveness. He cannot share the honors and privileges of a group to which he does not belong, nor can he call upon such a group for aid in time of need. As the society depends upon its members, so the members depend upon the society. The greatness of the one is the greatness of the other. One may minimize this dependence upon the group and, in fact, be drugged into an unconsciousness of its importance by temporary success, but failure, mental cretinism, and professional oblivion are the ultimate goals of such seclusion.

Charles E. Dawes aptly states, "If you work in a profession, in Heaven's name, work for it. If you live by a profession, live for it. Help advance your co-worker. Respect the great power that protects you, that surrounds you with the advantages of organization, and that makes it possible for you to achieve results. Speak well for it. Stand for it. Stand for its professional supremacy."

* * *

In another ninety days, the call will be made for your annual dues to county, state, and national societies. To many the curtailed income and forced economies of the past year will prompt a careful evaluation of membership value before the check is filled out. These are days when we, one and all, stop to count costs. The thoughtful physician will already have arrived at a decision to stay within the ranks of the organized groups. The less thoughtful may allow the dollars to obscure values. To this group, an appeal to thoughtful evaluation is directed. Nurtured by the riches of creative individualism, the professional society opens the gateway of happiness and progress to its members and maintains the highest ideals of the profession.

ADVANCES IN MENTAL HYGIENE

It is natural that the year nineteen thirty-three, marking as it does, the twenty-fifth anniversary of an organized mental hygiene movement, should be a year of unusual activity in stock-taking and planning in connection with all psychiatric and mental hygiene work.

This quarter century has marked the birth and healthy growth of the National Committee for Mental Hygiene, the Psychopathic Hospital and the Child Guidance Clinic; it has witnessed gratifying improvement in the methods of determining responsibility for crime and the revolution of our conception of both neuropathology and psychopathology; and it has given us, among others, Clifford W. Beers and Sigmund Freud, active in widely different fields to add to the list of persons headed by Pinel, Tuke and Dorothy Lynde Dix, who have contributed in an outstanding manner to the relief of the mentally afflicted.

However, no feeling of complacency may be entertained in the face of certain disturbing facts such as the increasing frequency of mental dis-

ease, the rising tide of suicide, homicide and juvenile delinquency and the many other evidences of mental unrest and moral obtundity.

The significant fact is that while beds for mental cases outnumber those in general hospitals, and while the general practitioner is the first and often the only physician to contact non-institutional neuropathic patients, only one-fiftieth of the time spent in medical training is devoted to the study of psychiatry. May this not point to a weakness in our system of education and to a partial solution of our problem?

A recent report made by the National Committee for Mental Hygiene, after a two years' study of psychiatric education, cites the urgent need for a fuller understanding of the mental aspects of general medical practice and a revision of the medical curriculum to this end. The committee proposes among other things that, while the making of a specialist is a matter of postgraduate instruction, nevertheless the medical college should teach the prospective physician the value of "the psychiatric approach;" it should emphasize the importance of the psychologic aspects of medicine and the treatment of the person rather than the disease; it should stress the concept of medicine as a social agency. The results of such a program, it is thought, would do much toward preventing many serious mental breakdowns and would keep in touch with scientific medicine a host of patients who are now being inadequately treated by unqualified persons.

In another direction, we might look for help to better hospital wards with more physicians in state hospitals, or to more psychiatric wards in general hospitals. The old prejudices will never be removed by building more psychopathic hospitals, necessary as they are for research and teaching, because they soon become stigmatized as state institutions. The stigma will only be removed when there is a more harmonious blending of the two types of hospitals; when psychiatric treatment is as freely and easily accessible as physical treatment; and when the false barriers between medicine, surgery and psychiatry are removed.

It cannot be said, however, that present methods of medical teaching or attitudes toward hospitalization are alone responsible for the present conditions, or that their improvement, however necessary, will solve the problem. There is a crisis in character closely tied in with our present crisis in economics and politics which cannot be handled independently and which will right itself partially at least, and without too much outside interference as these other situations are met.

Such are some of the major developments in the field of mental hygiene and some of the most obvious needs to which earnest lay and professional minds are turning their attention. Let us hope for the sake of future humanity that the words of Harry Emerson Fosdick, to the effect that scientific medicine in the next generation will make some of its momentous advances along the line which the mental hygiene movement has opened up, are truly prophetic.

INDIVIDUALISM

During the past year the best minds in the political, the economic, and the business worlds have been collected into organized units to develop plans for the re-organization of the fabric of human society to the end that economic tranquility be restored in these United States. The practice of medicine should not, and has not, escaped this painstaking research. During the past nine months, popular attention has been forcefully directed toward the economic aspect of medical practice, due to the final report of a five year study of the costs of medical care made by a committee of self-appointed, but nevertheless, notable investigators. Harmonious with the trend of the time, these recent researches have suggested or openly recommended governmental standardization and control of medical and hospital practice, as a panacea *par excellence*. If this suggestion is followed to its conclusion, extending the already culpable system of group practice, individualism in the practice of medicine will be destroyed.

These reports have very justly called forth a tremendous protest from the ranks of organized medical practice and already several very constructive schemes for reducing the costs of illness in America have been advanced by members of the medical profession. Thoughtful students of the situation do not deny that the costs of illness to the average family constitute a very serious and often unbearable burden. Many of us, however, believe that the measures proposed for the correction of these difficulties, are in themselves very largely responsible for the present situation.

Those who have practiced medicine for some length of time can remember when the average illness in a family required the attention and attendance of but one physician—the family doctor. Nursing service was given by interested friends and relatives. The diagnosis was made (or missed) without the aid of elaborate and costly special examinations. The better of these family physicians had highly developed sensibilities, so that irregularities of pulse rate, evidences of hypertension, the characteristic signs of nephritis and the clinical picture of the various fevers were un-

derstood and interpreted without the aid of specialists as consultants. Thousands of broken bones were satisfactorily set without the use of the x-ray or the occurrence of a lawsuit. It often appears today that the first physician to see the patient during an illness, either from a sense of his own inadequacy or because of the customs of the times, demands one or more consultants before an effort is made to establish a suitable treatment. Even for illnesses of a trivial nature, hospitalization is demanded by the patient or the doctor. The patient wishes to "keep up with the Joneses," and have an illness worthy of his, or more often, her, best efforts. The physician demands hospitalization since he deems it important to supplement his personal observations by the diagnostic aids available in the modern hospital, or because he finds it inconvenient personally to have his patients scattered over a wide area.

Apparently the former is the more common motivating influence since it would appear that many of the newer medical graduates, products of elaborate diagnostic hospital routine, feel helpless without every mechanical aid. One would not depreciate modern medical education, or belittle the excellent methods of diagnostic precision of the modern clinical laboratory. One does feel, however, that consultations should not be required in uncomplicated cases of usual illness, nor should the entire "fireworks" of the clinical laboratory be required for the proper diagnosis or management of minor ailments. Somehow one feels that what the world needs today as much as "a good five cent cigar" is a good, well trained, general practitioner, equipped with horse sense and enough of modern science to know when aid is needed and when it is merely fanfare.

The automobile has diminished space to such an extent that the city physician, and even the specialist, may cover a wide territory, but this very fact also increases the cost of medical care; and it will never be possible for a doctor who lives in one community and practices in another to claim that place in the hearts of his patients held by the old family physician, who was not only a part of the community, but also a part of the household. This is just another way of saying that the individual patient wishes to retain his individuality, and not become a case recognized only by a number and a diagnosis.

If one will but consider he will appreciate that all human activity is governed by individuality. Our home life, our business life and our religion is controlled by the spirit of individualism. It would not seem far-fetched then to believe that this same human being who demands in all other activities a respect for his individuality, and who in turn places his most devout faith and confidence in a creed of individualism, should demand a physician to serve as a counsellor in times of illness; one who not only recognizes the individuality in his patients, and who is interested in their lives and activities in a very personal way, but also one competent to offer the needed advice and not merely to serve as a clearing house or routing station for the patient.

If, as we have assumed, there is a crying demand for the return of the family counsellor, why should we have permitted the older system to fall into disuse? No doubt several important factors are involved, but it would appear that fundamental and most far-reaching has been the desire upon the part of the physician to surround himself by a wall of specialism, hoping thereby to eliminate or at least minimize the hardships and drudgeries of general practice, and at the same time to place himself in a position whereby he might receive a greater income from less physical effort. These aspirations are enviable from the selfish standpoint, but one wonders whether specialism in the practice of medicine may not become top heavy since it would seem that for success the system of specialism should be supported by a very staunch and firm foundation of competent and efficiently trained general practitioners.

THE NRA AND NURSING

The Board of Directors of the American Nurses' Association, at its regular meeting held in New York, New York, on August 25-26, 1933, voted to issue the following statement relative to the National Recovery Act and its implications for the nursing profession.

I. *The Application of the National Recovery Act to the Nursing Profession.*

Successive communications from the office of the National Recovery Administrator in response to inquiries from the American Nurses' Association have brought out the following points with reference to:

1. *Nurses.* The President's Reemployment Agreement, otherwise known as the Blanket Code, does not apply to nurses, as illustrated in the following quotation from the "President's Reemployment Agreement." ". . . shall not apply to professional persons employed in their profession." (July 27, 1933.)

2. *Hospitals.* All hospital employees have been exempt from code provisions; however, hospitals, public health nursing agencies, and any other group may sign the President's Reemploy-

ment Agreement in cooperation with the National Recovery Act. This agreement applies to the non-professional groups employed by these agencies. (August 17, 1933.)

3. *Nurses' Registries.* From legal interpretation of the Blanket Code, it does not appear that agencies placing nurses could bring the nurses so placed under code provisions, since these nurses would be acting in a professional capacity, and would be employed by the patient. The business office of the registry might be included in the Blanket Code. This would include the non-professional staff in the registry office. (August 23, 1933.)

II. *Implication of the National Recovery Act for the Nursing Profession.*

In view of the above interpretations, the Board of Directors of the American Nurses' Association present certain principles to be used for the guidance of local groups. These principles are as follows:

1. In making available the most effective type of nursing service, primary consideration of the patient, whether in the hospital or in the home, is an accepted principle.

2. No plan for economic recovery in this country will be complete without taking into consideration the matter of the thousands of graduate registered nurses who are unemployed at the present time, due to overproduction, unequal distribution, and the general strained economic conditions prevailing.

Because of the highly developed technical skill required in modern nursing, the service of the nurse is necessarily of a professional character; yet because of her practical relation to the public in terms of hours, days and weeks, this service must be dealt with from an economic standpoint, and so becomes involved in general problems of production and consumption.

3. An arbitrary limitation of hours controlled by law violates the whole spirit of nursing, as the comfort of the patient is the nurse's first consideration. Again, no nurse could be expected to hold to a specific hour schedule when engaged in emergency or disaster relief.

However, an attempt should be made to approach reasonable working conditions by encouraging, where possible, in the interest of the patient as well as the nurse, an eight-hour day for those employed on a daily basis, and a 48-hour week for those employed on a weekly or monthly schedule. It is undoubtedly desirable to shorten the hours of duty so that the individual nurse may have a reasonable working day and also that there may be a spreading of work.

4. It is urged that local communities be assisted in developing an understanding on the part of the public of the service rendered by all types of nurses. It is important, too, that they realize the need for keeping the salaries of the nurses above subsistence levels so that psychologically as well as physically they will be able to give the service which the patients need.

5. Recommendation formulated before the passing of the National Recovery Act—"In the interest of good nursing, we believe that nurses in caring for acutely ill patients should not be expected to work more than eight hours out of twenty-four. This service is to be arranged wherever and whenever possible without added expense to the patient. The community is to be informed that it has an opportunity which it has never had before to secure nursing service on this basis. We urge State and District Associations to bear this in mind and make every effort to secure the adoption of such a plan by those who employ nurses." This recommendation was accepted by the Board of Directors, American Nurses' Association, at its regular meeting on August 25, 1933.

PNEUMOTHORAX

"A History of Artificial Pneumothorax in America," which will run in five installments, began in the September number of the Journal of the Outdoor Life, published by the National Tuberculosis Association. The series is by a well known physician who has spent more than three years in gathering and compiling the material.

The comparatively recent rise of surgery in the treatment of tuberculosis has focused the attention of both tuberculosis specialists and of general surgeons on this method. The series of articles traces the history of the use of artificial pneumothorax from the very first mention of this method of treatment in America, made in a communication written by Dr. Daniel McRuer in 1835 and published in the *Boston Medical and Surgical Journal.* Naturally, much stress is laid on the paper read by Dr. John B. Murphy, of Chicago, in 1898, at the Denver meeting of the American Medical Association. The unfortunate conflict on priority between Murphy and Forlanini is also discussed and the strange lapse of interest for a decade following the death of Lemke, Murphy's associate, in 1904, is graphically recited. The author then comes down to the more recent developments during the first two decades of the present century and brings the history to the present time.

Copies of the Journal of the Outdoor Life for six months, beginning with the September number, may be secured through the National Tuberculosis Association, 450 Seventh Avenue, New York City, by advance subscription of fifty cents.

SPEAKERS BUREAU ACTIVITIES

POSTGRADUATE WORK

Fall and the reopening of schools, colleges and universities has started the trend of students back to school and studies. Not to be outdone by the "younger generation," Iowa physicians, about 300 strong, have enrolled for the fall postgraduate courses given by the faculty members of the College of Medicine and sponsored by the Speakers Bureau.

The work being offered this fall consists of two courses; one a combined course on obstetrics and pediatrics, given by Drs. E. D. Plass and P. C. Jeans; and the other course on diagnosis and treatment of common medical disorders, under the direction of Fred M. Smith, M.D. The courses began at Algona at 5 p. m., on Monday, September 26, where over 60 members have signed up for the work. The courses will continue for a period of ten weeks on the same day for each center as the day on which it started. The other centers where the courses are being given are: Jefferson on Tuesdays, where about 35 doctors have enrolled; on Wednesdays at Des Moines, where the courses have been made available to each member of the Des Moines Academy of Medicine and Polk County Medical Society; and on Thursdays at Marshalltown, where there is an enrollment of over 50.

The following comment was made by one doctor attending the opening lectures of these courses: "Dr. Plass and Dr. Smith gave the opening numbers on the program and they have certainly prepared a wonderful course. I feel well repaid for having travelled 110 miles to hear their lectures."

From reports made at a recent meeting of state medical society secretaries on postgraduate medical education, it is evident that Iowa is doing more work along this line than almost any other state. The interest in this type of work has grown by leaps and bounds since its inauguration in 1929. With the fall courses just under way, demands are already coming in from several centers for spring courses.

IN APPRECIATION

For over three years, the Speakers Bureau of the Iowa State Medical Society has been in active operation. Its activities include the selection of speakers for various groups; lay organizations, such as service clubs, women's clubs, parent-teachers associations, college and high school groups; scientific groups, such as county, district and state medical society programs, meetings of nurses, dentists and pharmacists; lecturers for postgraduate courses; clinicians for various types of clinics; and doctors to prepare health talks for radio presentation. Doctors have been sent to every corner of the state from every corner of the state. The Speakers Bureau feels that it has every right to be proud of the extensive educational program it is carrying out, but it also realizes that full credit for the success of its projects is due to the splendid cooperation of the Iowa physicians who fulfill the engagements contracted by the Speakers Bureau.

The only tangible compensation which the Bureau is able to pay these men is their traveling expenses, but it does offer these speakers its sincere appreciation and gratitude as well as the gratitude of every organization which has been served by them. These busy doctors are willing to devote hours of time in preparing these talks, lectures or papers and drive many miles in all kinds of weather, devoting what little leisure time they have in the interest of scientific and preventive medicine. Sometimes their message is given to a small group, sometimes to a large one, but it is always repeated and rebroadcast to the friends and families of the members of their audience, so that each talk reaches untold numbers.

Every effort is made by the Bureau constantly to add new names to the lists of those upon whom we can call to assist in this very worthwhile educational program. Those who are willing to help in this way are urged to inform their county society secretary, listing the ways in which they would prefer to serve and, if possible, giving the titles or subjects of talks which they are ready to give.

Some of the doctors who have so generously offered their services to the Bureau may not, as yet, have been called on and may thus feel that their efforts and time spent in preparation of talks have been to no avail and unappreciated, while some of their colleagues have been sent out repeatedly. So many details have to be taken into consideration in scheduling a speaker for a particular engagement that the selection is not an easy task. Every effort is made to avoid sending doctors too far, yet at the same time far enough so that his talk may in no way be construed as an "advertisement" of his own medical services. Specific requests are often made for a particular speaker or for a particular subject and every attempt is made to fill these, by calling on men who have talks prepared on the desired subject so that the speaker may be spared any unnecessary work. Often the date on which a speaker is requested conflicts with meetings of various kinds in that immediate locality and the Bureau tries to send a doctor who has no conflicting engagements. Many times the organization wanting the speaker must know within a few hours and the Bureau must call on some one whom they know will be able to fulfill that particular engagement.

These considerations may explain some of the difficulties in scheduling speakers and will, the Bureau hopes, enlist the sympathy and indulgence of its speakers if at times any one feels overworked or over-

looked. In building up a worthwhile program, mistakes will be made, but the Committee hopes that the results of its work will justify the means. As long as the Speakers Bureau can count on the continued cooperation and friendship of the speakers already enlisted and can continue to add names of new volunteers, the educational program of the Iowa State Medical Society cannot help but attain new and greater heights as time goes on.

MEETING OF MERIT

County societies throughout the state are holding such interesting meetings that it is hard to select any particular one as the "Meeting of Merit" of the month. The September meeting of the Wapello County Medical Society was a real occasion, honoring their distinguished member, Charles B. Taylor, president of the state society. State society officers and all members of the district of which Wapello County is a part were invited to join in the celebration. The Buchanan County Medical Society, which has been inactive, held a meeting the last of September to reorganize and take an active part in the state society program. The officers of this county are to be congratulated on this move and Drs. Fred Smith and E. D. Plass of Iowa City are to be sincerely thanked for the interesting program they presented at this most worthwhile meeting.

However, the meeting which has been awarded the distinction of "Meeting of Merit" for September is the meeting of the Tenth District Medical Society at Creston, on September 22. Doctors were present from every county in the district and great interest and enthusiasm were shown in meetings of this type. In the afternoon a chest clinic was held. After an enjoyable dinner and social hour, at which time short talks were given by the Councilor, Dr. James G. Macrae, the President of the State Society, Dr. Charles B. Taylor, and the Chairman of the Council, Dr. H. A. Spilman, the following very interesting program was presented:

Perineal Lacerations—C. Lorimor Bain, M.D., Corning.

Spinal Anesthesia—J. E. McFarland, M.D., Leon.

Endocrine Therapy of Menstrual Disorders—James T. Stanton, M.D., Mt. Ayr.

Experiences in Vienna—Ernest E. Shaw, M.D., Indianola.

All of the papers were well discussed.

The Bureau commends this type of program in particular because it is fulfilling the primary aim of a medical society, which is the development of its own members. The Speakers Bureau is continually stressing the importance and value both to the society and to the individuals themselves of drawing in the younger doctors in the community. Those who heard the excellent program at Creston heartily agree with this policy and congratulate Dr. John C. Parsons of Creston who had charge of the arrangements for this program.

CALL TO ARMS

Requests for speakers are coming to the Speakers Bureau in ever increasing numbers—particularly from lay organizations. Consequently the Bureau needs to add new recruits to its forces all over the state. Suggestions and recommendations will be most welcome from county, district and state society officers as to the men in their localities who are qualified to serve in this way.

Some time ago the Speakers Bureau sent out questionnaires to all those who have either already taken part in the work of the Bureau or who have been recommended to the Bureau. These questionnaires requested the doctors to list the subjects on which they were prepared and willing to speak before medical and lay groups. Many of these forms were filled out and returned immediately and the Bureau would like to take this opportunity to urge all who have not yet returned theirs to do so at once. In filling the many requests for speakers, it is of great help and a wonderful time saver to know on what subjects our members are willing to talk or what specific talks they have prepared and are ready to give.

The Bureau would like to have as complete data on its speakers as possible so that a list could be published and put in the hands of each county medical society secretary, for whatever suggestions they might want to use in planning the programs of their local societies.

RADIO TALKS

WOI—Fridays, 4:00 p. m.

WSUI—Thursdays, 8:00 p. m.

October 5-6—Child Training.

October 12-13—Headaches—H. B. Henry, M.D.

October 19-20—Chemistry Aids Medicine—George H. Clark, M.D.

October 26-27—Use and Abuse of Cathartics—M. B. Galloway, M.D.

November 2-3—Simple Rules of Health—C. A. Boice, M.D.

WOMAN'S AUXILIARY NEWS

Edited by the Press and Publicity Committee

Mrs. Oliver J. Fay, *Chairman,* 10 Thirty-fifth Street, Des Moines

AUXILIARY PAGE IN A. M. A. BULLETIN

We are going to try a new plan this year. Instead of sending out a news letter each month, the material which would reach you through this means will be published in the American Medical Association Bulletin. The news letter of the past has been most valuable. Reading the splendid ones written by Mrs. Overholser, I have always felt it was a great pity that they could not be placed in the hands of every member of the Auxiliary. Through the efforts of Mrs. Freeman and the generosity of the American Medical Association, the Auxiliary was given space in the Bulletin. Unlike the news letter, the Bulletin is accessible to every doctor's wife, while the mailing list for the news letter was necessarily limited to a few names. The state presidents, state presidents elect, and the state chairmen of press and publicity who hitherto received the news letter will receive an extra copy of the Bulletin for their files from me each month.

Mrs. Robert E. Fitzgerald, Chairman,
National Press and Publicity Committee.

State Board Meets

A delightful meeting of the newly organized board of the Woman's Auxiliary of the Iowa State Medical Society was held in Des Moines on September 17; a round table and get acquainted luncheon, the invitation called it, in preparation for the coming fall board meeting. The after luncheon hour was spent in discussion led by the new president, Mrs. W. A. Seidler of Jamaica, whose interest and enthusiasm was an inspiration to all who were present. Thirty-two members, coming from all parts of the state, were in attendance.

The fall board meeting will be held at the Fort Des Moines Hotel on Friday the 27th of October and a tea given by the Polk Auxiliary will be held immediately after the board meeting.

Woodbury County

The Auxiliary to the Woodbury County Medical Society was entertained at the home of Mrs. A. C. Starry at a one o'clock luncheon on Wednesday, September 14. Mrs. P. E. Keefe gave a clever resumé of her recent tour of Europe. Mrs. R. W. Perkins presided for the business hour. Dr. and Mrs. Keefe and Dr. I. E. Nervig of Sioux City attended the International Conference for the Study of Goiter held at Berne, Switzerland.

Mrs. R. W. Perkins.

THE DOCTOR'S WIFE*

Mrs. Mark A. Glaser, Los Angeles
(With apologies to Mr. Kipling.)

If you can hear the midnight ringing of the phone—
and not shiver,
If you can watch the roast beef crumbling in the pan
—and not quiver,
If you can still devour such things as lungs and brains
and like liver;

If you can have your parties scrambled down to
naught—and still be calm,
If you can gladly return the opera tickets—and seek
no balm,
If you can bow to Medica's relentless reign and have
no qualm;

If you can watch all your debtors lavishly splurge—
and never sigh,
If you can let a gloating world 'round you surge—
and never cry,
If you can be immuned to fragrant fumes and never
wry;

If above the turmoil a halo you can see—and feel
no 'larm,
If you can ever hold your head high as a tree—and
sing a psalm,
If you can sweetly smile and always helpful be—and
still have charm;

If you can always with tranquility endure such
martyr's strife,
Then good comrade, behold the Acme of the doctor's
perfect wife,
And he in grateful homage should to you devote his
love and life.

* The second prize essay of the California Auxiliary Essay Contest on "Educating the Doctor's Wife."

SOCIETY PROCEEDINGS

Black Hawk County

Three physicians from La Crosse, Wisconsin, furnished the scientific program for the Black Hawk County Medical Society, Tuesday, September 19. In addition to conducting a medical clinic in the afternoon, James A. Evans, M.D., spoke in the evening on The Clinical, Pathologic, and Roentgenologic Aspects of Gastric Ulcer, with special consideration of differentiation between benign and malignant lesions. The second paper was by S. M. Welsh, M.D., on The Anatomic and Etiologic Consideration of Gastric Ulcer, and the session closed with a paper by James McLoon, M.D., on Treatment of Gastric Ulcer, with special consideration of medical and surgical indications. Discussion of the papers was led by N. L. Hersey, M.D., of Independence, Hugo V. Kahler, M.D., of Reinbeck, and E. L. Rohlf, M.D., of Waterloo.

Bremer County

The regular monthly meeting of the Bremer County Medical Society was held at St. Joseph's Mercy Hospital in Waverly, Thursday, September 28, following a dinner at the Club Cafe. F. P. McNamara, M.D., of Dubuque, spoke on Lessons from Cases Which Come to Necropsy, and illustrated his talk with a collection of pathologic specimens from the cases discussed.

James E. Whitmire, M.D., Secretary.

Clinton County

Thursday, September 7, the Clinton County Medical Society held its annual picnic at Nelson's Cabin on the banks of the Mississippi River at Camanche. A large proportion of the members were present as well as several guests. A repast consisting of broiled steaks with the usual trimmings was served. No program was presented, but a very pleasant social evening was enjoyed by all.

Ralph F. Luse, M.D., Secretary.

Dubuque County

The Eightieth Anniversary Meeting of the Dubuque County Medical Society was held in Dubuque, Tuesday, September 12. The following case reports constituted the morning program: A Case for Diagnosis, R. R. Harris, M.D.; Third Degree Burn with Skin Graft, D. F. Ward, M.D.; Hemolytic Jaundice, A. B. Nesler, M.D.; Increased Longevity in Dubuque During the Past Fifty Years, W. J. Connell, M.D.; Treatment of Strabismus, J. A. Thorsen, M.D.; Rheumatic Carditis, L. E. Cooley, M.D.; Demonstration of X-ray Films, L. G. Ericksen, M. D.; Pyloric Obstruction in an Infant, C. C. Lytle, M.D.; Intestinal Obstruction, C. E. Loizeaux, M.D.; and Foreign Body in the Bronchus, H. E. Thompson, M.D. Dr. F. P. McNamara led the group on an inspection of the museum, after which a complimentary luncheon was served. The afternoon session consisted of the following papers and discussions: Surgery of the Large Bowel, A. C. Strachauer, M.D., of Minneapolis, discussion opened by T. F. Thornton, M.D., of Waterloo, and L. H. Fritz, M.D., of Dubuque; Everyday Pediatrics, Martin D. Ott, M.D., of Davenport, discussion opened by C. C. Lytle, M.D., and R. I. Theisen, M.D., both of Dubuque; and Types of Prostatic Hypertrophy and the Treatment, C. W. Losh, M.D., of Des Moines, discussion opened by H. E. Pfeiffer, M.D., of Cedar Rapids, and J. C. Hancock, M.D., of Dubuque.

Floyd County Meetings

At the regular meeting of the Floyd County Medical Society, Wednesday, July 26, C. W. Baldridge, M.D., and W. M. Fowler, M.D., both of the University at Iowa City, conducted a medical clinic. After a dinner at the Hotel Hildreth in Charles City, Dr. Fowler spoke on Hypochromic Anemia, and Dr. Baldridge discussed The Irritable Colon.

Tuesday, August 22, C. E. Van Epps, M.D., of the State University of Iowa conducted a neurologic clinic in the afternoon, and in the evening presented an interesting neurologic case together with a general discussion of neurology.

James B. Miner, Jr., M.D., Secretary.

Jackson County

The Jackson County Medical Society and its Auxiliary held their annual catfish dinner at Bellevue State Park, Thursday, September 7. Following the dinner, business sessions of both organizations were held. Speakers on the scientific program for the physicians included: Fred M. Smith, M.D., of Iowa City; Erwin von Graff, M.D., also of Iowa City; J. F. Ritter, M.D., of Maquoketa; and J. C. Dennison, M.D., of Bellevue.

Lee County

Thursday, September 28, members of the Lee County Medical Society convened in Fort Madison for a dinner meeting, after which the following papers were read: Transurethral Resection of the Prostate, G. D. Jenkins, M.D., of Burlington; The Movable Kidney, John Hanna, M.D., of Burlington; and News of the State Society, Clyde A. Boice, M.D., of Washington.

Louisa County

Only three members were absent when the Louisa County Medical Society met in Columbus Junction, Thursday, September 14. S. J. Lewis, M.D., of Columbus Junction, presented an interesting paper on Embolism of the Popliteal Artery, including two case reports.

E. R. King, M.D., Secretary.

Madison County Annual Meeting

Members of the Madison County Medical Society held their annual meeting at the Winterset Hospital, Monday, September 11. Immediately after dinner the following officers were elected for the coming year: Dr. Arnold L. Nelson of Winterset, president; Dr. Glenn J. Anderson of Winterset, vice president; Dr. C. B. Hickenlooper of Winterset, secretary and treasurer; Dr. I. K. Sayre of St. Charles, delegate; and Dr. Glenn J. Anderson of Winterset, alternate delegate. The scientific program consisted of The Management of Delayed or Non-union of Fractures, by D. C. Wirtz, M.D., of Des Moines, and a dry clinic by Arnold L. Nelson, M.D., of Winterset, demonstrating his method in the care of compound fractures of the digits.

C. B. Hickenlooper, M.D., Secretary.

Polk County

Approximately one hundred members of the Des Moines Academy of Medicine and Polk County Medical Society attended the meeting held Tuesday, September 26, at the Hotel Fort Des Monies, which marked the opening of the fall season of scientific programs. After an exceptionally interesting and worthwhile business session, two scientific papers were presented. Walter D. Abbott, M.D., of Des Moines, gave an illustrated lecture on Diagnosis and Treatment of Head Injuries, which was discussed by F. A. Ely, M.D., Francis R. Holbrook, M.D., and Tom B. Throckmorton, M.D. George A. May, M.D., of Des Moines, read a paper on The Practitioner's Problems in Middle Ear Disease, using lantern slides to illustrate his talk. The discussion of Dr. May's paper was opened by C. C. Walker, M.D., James E. Dyson, M.D., E. G. Linn, M.D., and John H. Tait, M.D. A number of the members remained for the usual social hour.

L. K. Meredith, M.D., Secretary.

Pottawattamie County Physicians and Dentists Meet

More than one hundred physicians and dentists attended the joint meeting of the Pottawattamie County Medical Society and the Council Bluffs Dental Society held Thursday, September 21, at the Mercy Hospital in Council Bluffs. The address of the evening was The Relationship Between the Medical and Dental Professions, and was delivered by H. D. Coy, D.D.S., of Hamburg, Iowa, a past president of the Iowa State Dental Society. A symposium on Focal Infections was presented with the following speakers: Focal Infection in the Mouth, Harry Boyne, D.D.S., M.D., of Omaha; Focal Infection in the Sinuses and Tonsils, S. D. Maiden, M.D., of Council Bluffs; Focal Infection in the Genito-Urinary Tract, G. V. Caughlan, M.D., Council Bluffs; and End Results of Focal Infection, W. J. Stech, M.D., of Council Bluffs, and E. B. Floresch, M.D., of Council Bluffs.

Poweshiek County

James C. Hill, M.D., of Newton, furnished the scientific paper for the Poweshiek County Medical Society, when that organization met in Grinnell, Tuesday, September 19. Dr. Hill spoke on Duodenal Ulcers.

Sac County

The Sac County Medical Society met at Odebolt, Thursday, September 21, with ten members present. James McAllister, M.D., of Odebolt read a very interesting and instructive paper on Preoperative Preparation of the Surgical Patient. This paper was well received and the discussion brought out many often overlooked points. An interesting feature of the evening's program was an unexpected "wet clinic" conducted on a patient who drifted in with a part of a tin whistle in his throat. Being a man of more than ordinary size, the patient managed to escape the "medicos" in good order but with his whistle in situ. He was given considerable relief, and the society saw an interesting case.

J. R. Dewey, M.D., Secretary.

Scott County

The opening meeting of the fall season for the Scott County Medical Society was held in Davenport, Tuesday, September 5, with C. W. Baldridge, M.D., of the State University of Iowa College of Medicine as the speaker of the evening. Dr. Baldridge's subject was Functional Diseases of the Gastro-enteric Tract.

Henry A. Meyers, M.D., Secretary.

Tama County

More than fifty members and guests of the Tama County Medical Society met in Toledo, Friday, September 8, for a dinner meeting, after which Royal F. French, M.D., of Marshalltown, addressed the group on Hospital Work in India.

Wapello County

Tuesday, September 19, members of the Wapello County Medical Society and the Ninth Councilor District held a meeting at the Wapello Club in Ottumwa, honoring Dr. Charles B. Taylor, president of the Iowa State Medical Society. Dr. Oliver J. Fay of Des Moines, presided as Toastmaster for the following program: Dr. Taylor as a Man, Fred M. Smith, M.D., of the State University of Iowa City; The Future of Medicine in Iowa, Daniel J. Glomset, M.D., of Des Moines; Activities of the State Medical Society, John H. Peck, M.D., of Des Moines; and Dr. Taylor's Local Medical Society Activities, W. C. Newell, M.D., of Ottumwa. Dr. Taylor responded to these eulogies with appropriate remarks in his own inimitable fashion. Immediately after the banquet, Dr. Royal F. French, of Marshalltown, presented an illustrated lecture on Medical Experiences in India.

The Wapello County Medical Society will be hosts to the Ninth Councilor District and other invited guests on Tuesday, October 17, at a complimentary dinner at the Wapello Club in Ottumwa, honoring their local Dean of Medicine, Dr. Smith A. Spilman. An excellent program has been arranged, with Dr.

Charles B. Taylor, president of the Iowa State Medical Society, as toastmaster. Others to appear on the program are Dr. Walter L. Bierring, of Des Moines, Dr. T. U. McManus of Waterloo, Dr. Frank M. Fuller, of Keokuk, and Dr. W. C. Newell of Ottumwa. Every effort is being taken to make this meeting in honor of Dr. Spilman a huge success, and it is sincerely hoped that his many friends and associates will find it convenient to attend.

Evon Walker, M.D., Secretary.

Wayne County

Friday, September 15, the Wayne County Medical Society met in Allerton, and the following scientific papers were presented: The Significance of Fever, Benjamin S. Walker, M.D., of Corydon, and Infantile Paralysis, T. E. Englehorn, M.D., of Lineville.

Woodbury County

The Woodbury County Medical Society held its Thirtieth Anniversary meeting on Tuesday, September 26, in Sioux City. R. N. Larimer, M.D., read a paper on the History of the Medical Repository, and anniversary talks were given by Dr. Prince E. Sawyer, and Dr. F. J. Murphy.

Tuesday, October 24, the society will have as its guest speaker Arthur E. Hertzler, M.D., of Halstead, Kansas, professor of surgery, University of Kansas School of Medicine. Dr. Hertzler will discuss the Modern Slant of the Diseases of the Mammary Gland. Visiting physicians are cordially invited.

Lawrence E. Pierson, M.D., Secretary.

Sixth Councilor District Meeting

The joint meeting of the Sixth Councilor District and the Jasper County Medical Society, held at Newton, Tuesday, September 5, was an excellent example of a well balanced program. The scientific session consisted of Early Clinical Manifestations and Treatment of Coronary Artery Disease, Fred M. Smith, M.D., of the State University at Iowa City; Nutrition of the Normal Child, Julian D. Boyd, M.D., of the State University at Iowa City; and Tumors of the Bladder, F. Harold Entz, M.D., of Waterloo. After the scientific papers, Dr. C. W. Ellyson, councilor for the district, gave a brief report on membership in the district. Dr. E. F. Besser of Newton, presided over the six-thirty banquet, and introduced Dr. John F. Harp of Prairie City, the oldest practitioner in Jasper County, who gave a most interesting discussion on the "things they didn't know anything about" in the early days. Dr. Charles B. Taylor of Ottumwa, then introduced Dr. Walter L. Bierring of Des Moines, who spoke on The Historical Sequence of Medical Events. Over sixty physicians attended the afternoon and evening meetings. All counties in the district were represented and aided in planning for future activities in the district. The Jasper County Society and Newton physicians in particular, are to be congratulated and thanked for the high class professional entertainment.

C. W. Ellyson, M.D., Councilor.

INTERESTING NEWS

In Brief

Recent statistics show that the death rate from accidents in the home is declining so far as children are concerned, but is steadily rising for adults.

During a seven-year period, 40,000 Iowa children received prophylactic treatment against diphtheria which has reduced the death rate from 239 to 44 a year.

Predicated on the basis of clinical observation, three New York City physicians claim that hyperacidity, existing usually in youth, when found in middle age, is indicative of longevity.

President Mahan, of Creighton University, announces the appointment of Dr. Bryan M. Riley as Dean of the School of Medicine and Dr. Adolph Sachs as head of the Department of Internal Medicine.

Robert E. Neff, administrator of the University hospital at Iowa City, was elected first vice president of the newly organized American College of Hospital Administrators at its recent meeting in Milwaukee.

Early opening of the new $1,300,000 veterans' hospital in Des Moines is anticipated by the local manager, Dr. F. L. Williams. Eighteen to twenty doctors and thirty nurses will be required to man the institution.

To lower metabolism and thus relieve heart work during congestive heart failure and angina pectoris, three Boston physicians recommend total thyroidectomy followed by thyroid feedings to prevent severe myxedema.

A Paris surgeon introduces a small rotary pump between the donor and recipient in a blood transfusion, claiming to eliminate clotting and also to give the transfused blood impulses simulating those of the natural pulse.

Dr. William H. Welch of Johns Hopkins University, recognized as "Dean of American Medicine," has added to his long list of honors that of being elected Honorary Vice Chairman of the National Research Council.

Dr. Nathaniel W. Faxon, of Rochester, New York, newly elected president of the American Hospital Association, has announced that the organization will devote a year of intensive effort to establishment of group hospitalization plans.

Basing his assumption upon the study of a skeleton sent from Egypt in 1897 to the University of Pennsylvania, Dr. John Ruhrah of Johns Hopkins University states that the children of Egypt 4500 years ago suffered from infantile paralysis.

A three-hour bath in tannic acid during which the burns become well tanned is a feature of the modern treatment of extensive burns as described by Dr. Donald B. Wells of Hartford, Connecticut, at the recent meeting of the American Medical Association.

Amyl nitrite, well known as a heart stimulant, has been declared by three Indianapolis physicians to be a better antidote in cyanide poisoning than methylene blue. Amyl nitrite is more desirable in these cases since it may be administered by inhalation, while the dye must be injected hypodermically.

Dr. George Crile of the Cleveland Clinic has recently estimated that there are over a million surgical operations performed in the United States each year, and predicts that in the coming century fewer operations will be required because of the rapid advances in the fields of biochemistry and biophysics.

In reporting upon the use of an anti-serum called guglobulin in the treatment of cancer, Dr. Thomas Lumsden of the London Hospital, pronounces his results, as "encouraging," but feels that his experiments are not sufficiently conclusive to warrant the extensive use of the Lumsden serum in cases suitable for surgery or radiation.

PERSONAL MENTION

Dr. John Parish will be associated with his father, Dr. O. F. Parish in the practice of medicine in Grinnell. The young Dr. Parish is a graduate of Harvard Medical School, and served an interneship of two years at the Palmer Memorial Hospital in Boston, as well as two years at Johns Hopkins University Hospital in Baltimore.

Dr. Andrew H. Woods of Iowa City, was a guest speaker for the Missouri-Kansas Neuropsychiatric Society at Kansas City, October 6. His title was "The Contribution of Medical Science to Law."

Dr. M. B. Cunningham, who was graduated from the State University of Iowa College of Medicine, and who served an interneship at the Broadlawns General Hospital in Des Moines, has located in Stratford for the practice of medicine.

Dr. Emil C. Junger, who has practiced medicine in Soldier for the past twenty-one years, is leaving that city, and will locate somewhere in the west.

Dr. J. E. O'Keefe and family have returned to Waterloo from a two months' vacation tour of Europe, during which time Dr. O'Keefe attended the International Conference for the Study of Goiter held at Berne, Switzerland.

Dr. Marvin Sukov of the State University College of Medicine staff at Iowa City, has been added to the staff of physicians at the State Hospital in Clarinda.

Dr. F. E. Sampson of Creston, spoke before the Rotary Club, Monday, August 21, on "The Greater Community Hospital."

Dr. G. H. Bassett, who was graduated from the State University College of Medicine at Iowa City in 1930, has located in Sac City. Dr. Bassett has spent two years as an interne at the Henry Ford Memorial Hospital in Detroit, and one year at St. Anthony's Hospital in Oklahoma City.

Dr. D. C. Steelsmith, former State Health Commissioner, has accepted the position as Director of the Washington County Health Unit, according to newspaper reports.

Dr. P. C. Jeans, head of the pediatrics department at the University of Iowa College of Medicine, was a guest speaker at the Sixteenth Annual Convention of the American Dietetic Association, held in Chicago, October 9. His subject was "A Clinical Test for Vitamin A Deficiency."

Dr. H. F. Turner, formerly of Kansas City, Missouri, has located in Sumner, where he will take over the practice of Dr. F. J. Bries, who has moved to Holy Cross.

Dr. E. D. Russell, formerly of Fort Dodge, and more recently of McGregor, will locate in Waukon, where he will practice his specialty of eye, ear, nose and throat diseases.

Dr. Tom B. Throckmorton of Des Moines, spoke before the Missouri-Kansas Neuropsychiatric Society at Kansas City, October 6, on "The Role of Observation in Neurologic Diagnosis."

Dr. Ross C. King of Lincoln, Nebraska, has located for the practice of medicine in Clinton, where he will succeed Dr. R. A. Butler. Dr. King was graduated from the University of Nebraska School of Medicine, and served his interneship in the Maryland General Hospital in Baltimore.

Dr. Knight E. Fee of Toledo, has been appointed with Dr. C. W. Maplethorpe and Dr. A. A. Pace, to take care of the work for the State Juvenile Home located at Toledo. Each of the physicians will serve for a period of four months.

Dr. Theodore Blong will be associated in the practice of medicine with Dr. A. E. Beyer in Guttenberg. Dr. Blong, a recent graduate of the Marquette University Medical School, has just completed a two years' interneship in Milwaukee hospitals.

Dr. L. C. Howe was recently elected president of the Muscatine Welfare Association. Dr. Howe has served on the board of this organization for eighteen years.

Dr. H. C. Vander Meulen, who for the past three years has been superintendent of the county hospital at Las Vegas, Nevada, has located in Pella, where he will enter the private practice of medicine.

Dr. L. W. Koontz of Vinton, has been appointed physician for the Iowa School for the Blind, to succeed the late Dr. J. E. Luckey.

Dr. James L. Ryan will locate in Hampton, where he has rented the office formely occupied by Dr. W. J. Aagesen. Dr. Ryan is a graduate of the Marquette University Medical School at Milwaukee.

Dr. S. S. Westly of Manly, spoke before the Lions Club, Wednesday, September 20. Dr. Westly recently returned from a tour of Russia and his talk was descriptive of the trip and conditions as they exist in that country.

MARRIAGES

Miss Vera Mutch of Grundy Center, and Dr. A. A. Dulmes, formerly of Grundy Center, were married in Klemme, Wednesday, August 30. After a short wedding trip that will take them to Odell, Wisconsin, the home of Dr. Dulmes' parents, and to Chicago, the young couple will return to Klemme, where Dr. Dulmes has just located, taking over the practice of Dr. George Zinn.

The marriage of Frances Louise Allen and Dr. Henry H. Hamilton, both of Cedar Rapids, took place Tuesday, October 3, at the First Presbyterian Church in Cedar Rapids. Dr. Hamilton, who is the son of Dr. and Mrs. John Hamilton, has been practicing about three years.

Friday, September 1, Miss Thelma Thompson of Cedar Rapids, and Dr. Joseph R. Shorey of Davenport, were married in Bond Chapel of the University of Chicago. After a short honeymoon, Dr. and Mrs. Shorey will return to Davenport, where Dr. Shorey has been practicing for two years.

Miss Ruey Moore of Cedar Rapids, and Dr. Robert M. Collins of Des Moines, were united in marriage, at the home of the bride's parents in Cedar Rapids, Saturday, September 16. Dr. and Mrs. Collins left Saturday evening for a short trip, after which they will be at home in Iowa City, where Dr. Collins is an assistant in the department of obstetrics at the University of Iowa College of Medicine.

DEATH NOTICES

Armitage, George Ira, of Murray, aged sixty-two, died September 10, after several years of failing health. He was graduated in 1897 from the Keokuk Medical College, and at the time of his death was a life member of the Clarke County and Iowa State Medical Societies.

Emmons, William Henry, of Decorah, aged sixty-five, died suddenly September 9, after a heart attack. He was graduated in 1892 from Rush Medical College, and at the time of his death was a member of the Winneshiek County Medical Society.

Ferris, Lewis Henry, of Melbourne, aged fifty-two, died September 16, after a long illness following an automobile accident a year ago. He was graduated in 1912 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Marshall County Medical Society.

Gethman, Charles Christian, of Eldora, aged seventy, died September 5, in an Iowa City hospital. Weakened heart action was the immediate cause of death, although Dr. Gethman had been suffering from diabetes for several years. He was graduated in 1894 from the State University of Iowa College of Homeopathic Medicine, and at the time of his death was a member of the Hardin County Medical Society.

Johnson, Norman Willis, of Quasqueton, aged sixty, died September 17 as the result of cerebral hemorrhage. He was graduated in 1904 from the Keokuk Medical College, College of Physicians and Surgeons, and at the time of his death was a member of the Buchanan County Medical Society.

HISTORIC OPERATION PRODUCED IN MOTION PICTURES

One of the outstanding events of interest in connection with the exhibit of the Mallinckrodt Chemical Works of St. Louis, now showing at the Chicago Century of Progress Exposition, is a motion picture presentation of that noted operation performed by Dr. Horton and Dr. Warren of the Harvard Medical School in 1846. This epoch-making event has been reenacted especially for motion picture presentation on this occasion. Copies of authentic drawings, sketches, wood cuts and engravings further illustrate the history of the medical profession in its fight to control pain, showing the valiant efforts of physicians in the past to alleviate this suffering.

In strong contrast to this historic setting, appears the ultra-modern operating room reproduced from the most recent of those built at Barnes Hospital in St. Louis.

History of Medicine in Iowa

Edited by the Historical Committee

Dr. Henry B. Young, Burlington
Dr. Frank M. Fuller, Keokuk
Dr. Tom. B. Throckmorton, Des Moines
Dr. Walter L. Bierring, Des Moines
Dr. John T. McClintock, Iowa City

The History of Medicine in Lucas County

Tom Morford Throckmorton, A.M., M.D.,
Chariton
Tom Bentley Throckmorton, B.Sc., M.D.,
Des Moines

(Continued from last month)

Dr. Samuel Buzzard

Dr. Samuel Buzzard was born in Pocahontas County, West Virginia, October 1, 1842. He was a graduate of the Philadelphia University of Medicine and Surgery, Philadelphia, Pennsylvania, in the class of 1871. He married Miss Sarah Fannie Morrison of Jacox, Pocahontas County, West Virginia, September 22, 1870. In 1871, Dr. Buzzard came to Iowa and located in Marion County. He was located at Attica for six years; and for five years he practiced in Eldorado. He came to Lucas County in 1883. His post office address at that time was Ola, Iowa. He purchased a large farm of several hundred acres in Cedar township, where he lived for ten years. During this time he acted as overseer of his farm, engaged in stock raising and carried on a country practice. About 1903, when his wife's health began to fail, he leased his farm and moved to Chariton, where he purchased a home and opened an office. Later, he took his wife to California in the hope that the mild winds and equitable climate on the coast would prove beneficial to her health. After a sojourn for a year, the doctor brought his invalid wife back to Chariton. Mrs. Buzzard's vitality gradually failed and, surrounded by her children and friends, she passed away. The doctor remained in Chariton and divided his time between his business interests and his practice until the time of his death.

Dr. Buzzard was a man of good judgment and was well qualified as a medical practitioner, being safe, conservative, sympathetic and faithful in attendance, positive in nature and fearless in espousing a cause which he believed to be right. He united with the Methodist Episcopal Church when a young man. The doctor died September 16, 1914, in the Iowa Methodist Hospital in Des Moines.

Dr. Buzzard had a son who was a graduate in medicine and a daughter, Cloe, who was a graduate nurse. She ministered to her father's care and comfort during his last illness.

Dr. Iranarch Sylvester Buzzard

Dr. Iranarch Sylvester Buzzard was the oldest son of Samuel and Fannie (Morrison) Buzzard. He was born in Marion County, Iowa, in 1873. He was a graduate of Keokuk Medical College, Keokuk, Iowa, in the class of 1898. Following his graduation he located in Belinda, a small village in the northeastern part of the county. After a time he moved to Russell, where he remained for several years. He came to Chariton about 1911. Dr. Buzzard spent a year in Chicago taking postgraduate work. He also spent some time in Europe furthering his studies in eye, ear, nose and throat work. On his return home, he relocated in Waterloo, Black Hawk County. He later moved to Carroll, Carroll County, Iowa, which city has since been his residence.

Dr. Charles Frank Elrod

Dr. Charles Frank Elrod was born in New Richmond, Indiana, May 23, 1848. When he was about one year old his parents moved to Fayette County, Iowa. After the death of his father, young Charles was obliged to care for the family. He

came to Marion County, Iowa, at the age of seventeen, where he worked at farming. Later he attended a course of lectures at Keokuk Medical College at Keokuk, Iowa. He then entered the practice of medicine at Gosport, Marion County. He was married to Miss Sarah E. Ruthford. Later he changed his location to Ladora, Iowa, in which place he remained in active practice for thirteen years. Dr. Elrod came to Chariton in 1904. He was not a graduate in medicine, but was licensed under the "time act" in 1886. He was an active member of the Masonic Order and at his death he was the oldest Mason in the county, in age. He was likewise a member of the Independent Order of Odd Fellows and was affiliated with the Methodist Episcopal Church. The doctor died at his home in Chariton, May, 1932, at the ripe old age of four score years and four. Funeral services were held for him at the Beardsley funeral home. Interment was in the Chariton cemetery.

Dr. Charles D. Harland

Dr. Charles D. Harland was born in 1878. He was a graduate of the Medical Department of the State University of Iowa, Iowa City, receiving his diploma April 9, 1901. He came from What Cheer, Iowa, to Chariton, May 26, 1906. The doctor moved from the city after a short stay, but we have no further record of his activities.

Dr. Guy Wayne Larimer

Dr. Guy Wayne Larimer was born in Chariton, September 24, 1880. His parents were George William and Emma (Ward) Larimer. As a boy, young Guy attended the public schools, and was graduated from the Chariton High School in the class of 1897. He then attended Simpson College at Indianola, Iowa, for two years, after which time he pursued his academic and medical studies at Northwestern University, Chicago, Illinois. From this institution he received his Bachelor of Arts degree in 1901, and his Doctor of Medicine degree in 1905. After serving as an interne in the Cook County Hospital, at Chicago, Dr. Larimer located in his boyhood town in February, 1907. He continued to practice in Chariton for fourteen months when he moved to Salida, Colorado, where he accepted the surgeonship for the Denver & Rio Grande Western railroad in its hospital in that city. The doctor was married to Miss Wiles Craig, October 12, 1910. They are the parents of one son, Craig Wayne. The family still lives in Salida.

Dr. Jeannette Throckmorton Dean

Dr. Jeannette Throckmorton Dean, born in Derby, Lucas County, Iowa, January 26, 1883, was the second daughter of Dr. Tom Morford and Mary (Bentley) Throckmorton. She received her early education in the public schools at Chariton. Following her graduation from the Chariton High School in 1900, she entered Simpson College at Indianola, Iowa. She was graduated from this institution in June, 1904, receiving at that time her Bachelor of Philosophy degree. She matriculated in the Keokuk Medical College, College of Physicians and Surgeons, Keokuk, Iowa, the following September. Her bachelor's degree permitted her to receive advanced standing; hence by diligent work and close application to her studies, she completed the course in three years and received her Doctor of Medicine degree in May, 1907. She was the recipient of the highest average grade of any of the graduates who took their examination for state licensure that year.

Following her graduation, she entered into partnership with her father at Chariton. Here for eleven years she carried on a country practice. She devoted a great deal of attention to diseases of children and to obstetrics. At odd times she carried on her literary studies *in absentia,* which ultimately resulted in her obtaining the Master of Arts degree from Iowa Wesleyan College, at Mount Pleasant, Iowa, in 1919. In 1909 she entered the Medical Department of the University of Nebraska, at Omaha, and was graduated from that school in the class of 1910.

She became identified with both the county and state medical societies in 1907 and with the American Medical Association. She likewise was a member of the State Society of Medical Women and served that body as its president in 1918. In 1921, she became a Fellow of the American College of Physicians.

She left the practice of medicine in 1919 to enter the United States Public Health Service, which acted in cooperation with the Iowa State Board of Health. Her work caused her to travel not only throughout Iowa, but in many of the other states in the union. After a service of several years in this department, the doctor pursued a year of graduate study in psychology in Columbia University, New York City, and spent a year in similar work in the University of Chicago. She then came to Des Moines to become the head of the Iowa State Medical Library, in which capacity she is now employed.

The doctor was married to Dr. Charles Noah Dean, of Sumner, Illinois, March 1, 1928. He was stricken with an acute illness from which he died about ten days following his marriage.

Dr. Curtis Dean Pitts

Dr. Curtis Dean Pitts was a graduate of the Keokuk Medical College, Keokuk, Iowa, in the class of 1891. He came from Knoxville, Marion County, Iowa, to Chariton in 1911. The doctor did not remain long in the community.

(Author's Note:—Deep appreciation hereby is expressed to Dr. Frank P. Norbury, my son's revered preceptor, for his kindness in contributing the following sketch to this history. Its inclusion was permitted solely in the interest of a complete record.—Tom Morford Throckmorton.)

Dr. Tom Bentley Throckmorton

Dr. Tom Bentley Throckmorton, son of Dr. Tom Morford and Mary Ann (Bentley) Throckmorton, was born in Derby, Lucas County, Iowa, January 20, 1885. He entered Simpson College, Indianola, Iowa, in 1903, where he pursued his academic studies for the next two years. In September, 1904, he matriculated as a student of medicine, in the Keokuk Medical College, College of Physicians and Surgeons, Keokuk, Iowa. In 1906, he re-entered Simpson College and received his Bachelor of Science degree in June, 1907. In the fall of 1906, Tom Bentley resumed his medical studies at Keokuk. Here he became an Instructor in Physics and Chemistry for the freshman class. During this college year he published his first paper in the college bulletin, the subject being "Cerebral Localization, With Special Reference to the Position and Subdivisions of the Motor Area." In the autumn of 1908, Tom Bentley entered the Jefferson Medical College in Philadelphia. Here he was fortunate in coming in contact with Dr. Francis X. Dercum, Professor of Nervous and Mental Diseases, who greatly influenced, thereafter, his career as a student and as a physician.

After his graduation from the Jefferson Medical College in 1909, he entered the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases, on a term of service as interne. At the time of his graduation, Dr. Tom was the recipient of the Dercum Gold Medal prize, as a reward of merit, in presenting the "Best Examination in Neurology."

After the completion of his interneship in Philadelphia, Dr. Throckmorton returned to his home in Chariton, where he joined his father and sister in the practice of medicine. On July 1, 1910, the opportunity having been offered him, and wishing to have more clinical experience in mental disorders, he became an assistant physician on the staff of the Cherokee State Hospital for the Insane, Cherokee, Iowa, then under the supervision of Dr. M. N. Voldeng. After a year of service, he resigned his position, and in August, 1912, he located in Des Moines, as a partner of the late Dr. Charles E. Ruth. He became an instructor in neurology in Drake Medical College in 1912-1913.

Dr. Throckmorton was honored in May, 1916, by being elected secretary of the Iowa State Medical Society. Likewise, that year, he became a member of the Chicago Neurological Society. He was a member of the first class from Iowa to receive fellowship in the American College of Physicians. In 1927, he was elected Governor of the College for Iowa, which office he continues to retain. Other distinctions have been accorded him, namely: delegate from the Section of Nervous and Mental Diseases of the American Medical Association since 1922; member of the program committee which arranged the "Diamond Jubilee Anniversary" of the Iowa State Medical Society, in May, 1926. He relinquished the office of secretary of the Iowa State Medical Society in May, 1930, having served longer than any predecessor, fourteen consecutive years. In 1932, he was elected secretary of the Inter-State Postgraduate Medical Association of North America. Dr. Throckmorton has been an active and constructive contributor to medical literature. His publications have appeared in both domestic and foreign journals. In addition to his medical activities, Dr. Throckmorton has taken a tremendous interest in Masonry, of which order he is an ardent devotee. In 1924, he served as Master of the largest lodge in the grand jurisdiction of Iowa. He also has served the Grand Lodge of Iowa as Committeeman, Senior Grand Deacon, Deputy Grand Master, and Senior Grand Warden,

Dr. Throckmorton was married at Washington, Iowa, January 21, 1911, to Edna Jeniza Dudley, a daughter of the Rev. and Mrs. Homer Price Dudley.

Dr. Frank P. Norbury.

Dr. Charles Lewelyn Baskin

Dr. Charles Lewelyn Baskin was born in 1882. He was a graduate of the University of Michigan Medical School, Ann Arbor, Michigan, in the class of 1912. After his graduation he located in Chariton, where he continued in practice until the World War. He tendered his services to his country during that conflict. After leaving the army he did not return to Chariton, but became engaged in the practice of medicine in Akron, Ohio, in 1925.

Dr. Leslie E. Elliott

Dr. Leslie E. Elliott was graduated from the American Medical Missionary College, Chicago, Illinois, June 21, 1904. The doctor came from Page County, Iowa, to Chariton, in December, 1912. We have no further record of his activities.

Dr. Frank Clinton Scott

Dr. Frank Clinton Scott was born in Illinois in 1885. He was a graduate of the Keokuk Medical College, College of Physicians and Surgeons, Keokuk, Iowa, in the class of 1908, and located in Chariton June 10, 1915. He limited his practice to diseases of the eye, ear, nose and throat. Dr. Scott left Chariton about 1924, and was located in Waco, Texas, in 1925.

Dr. James Archie Matson

Dr. James Archie Matson, a native of Iowa, was graduated from the Medical Department of the Iowa State University, Iowa City, Iowa, in 1905. He located in Chariton in 1916, but did not remain long in the community. We have no further record of his activities.

Dr. Leo Cornelius Kuhn

Dr. Leo Cornelius Kuhn was born in 1889. He was a graduate of Hahnemann Medical College, Chicago, Illinois, in the class of 1916. The doctor came to Chariton, August 12, 1916, where he succeeded Dr. Frank H. Boynton, who was moving with his family to Los Angeles, California. Dr. Kuhn's services were accepted by the government during the World War. We have no record of his activities after he joined the army.

Dr. Creed Calvin Calbreath

Dr. Creed Calvin Calbreath was the youngest son of Dr. William J. and Elizabeth Calbreath. He was born in Cleopatra, Missouri, June 11, 1867. He was a graduate of Valparaiso Normal School, Valparaiso, Indiana, in the class of 1888. After receiving his medical degrees from the Keokuk Medical College, Keokuk, Iowa, in 1892, and the University of Illinois College of Medicine, Chicago, Illinois, he practiced medicine in Wayne County for twenty-five years. On December 26, 1905, he married Miss D. Pearl Jenkins at Princeton, Missouri. They were the parents of two children. The doctor located in Chariton in 1916. Here he continued as district representative of the Northwestern Mutual Life Insurance Company, of Milwaukee, Wisconsin. Dr. Calbreath was a member of the Methodist Episcopal Church. He died on March 26, 1932, and was buried in Chariton cemetery.

Other physicians who were located in Chariton at one time, and of whom but little is known, are as follows:

Dr. Burns and Dr. Kirkpatrick were in the town in an early day. Dr. Mann left the community about the year 1864. Dr. R. L. St. John was practicing medicine in Chariton in 1868. Dr. Ralph X. Smith, a graduate of Marion Sims Medical College, St. Louis, Missouri, in the class of 1894, came to Chariton from Lenox, Taylor County, Iowa. Dr. Peter James, a native of Germany, was a graduate of the Bellevue Hospital Medical College, New York City, in the class of 1885. He came from Des Moines, Polk County, Iowa, to Chariton, but there is no record of when he arrived or departed.

(To be continued next month)

OMAHA MID-WEST CLINICAL SOCIETY

The first annual assembly of the Omaha Mid-West Clinical Society will be held at the Hotel Paxton in Omaha, October 30 to November 3, inclusive. Addresses will be delivered before the general assemblies as follows: Leukemia, R. H. Jaffe, M.D., Director of Laboratories, Cook County Hospital, Chicago; Diagnosis and Treatment of Renal Infections, J. C. Birdsall, M.D., Professor of Urology, Graduate School of Medicine, University of Pennsylvania, Philadelphia; Dermatophytosis Down to Date, F. D. Wiedman, Professor of Dermatological Research, University of Pennsylvania, Philadelphia; Clinical Pathological Considerations of Fractures of the Neck of the Femur, Kellogg Speed, M.D., Clinical Professor of Surgery, Rush Medical School, Chicago; The Present Status of Serum Therapy in Pediatrics, Julius H. Hess, M.D., Professor of Pediatrics, University of Illinois, Chicago; The Normal and Pathological Motor Physiology of the Colon, James T. Case, M.D., Professor of Radiology, Northwestern University, Chicago; address by Dean Lewis, M.D., Professor of Surgery, Johns Hopkins University, Baltimore; Coronary Thrombosis — Past, Present and Future, James B. Herrick, M.D., Clinical Professor of Medicine, Rush Medical College, Chicago; Neurology and General Medicine, Lewis J. Pollock, M.D., Professor of Neurology, Northwestern University, Chicago; Infection of the Petrous Apex and the Sphenoidal Base, Wells P. Eagleton, M.D., Medical Director, Newark Eye and Earl Infirmary, Newark, New Jersey; and Birth Injuries of the Child, Hugo Ehrenfest, M.D., Assistant Professor of Clinical Gynecology and Obstetrics, Washington University, St. Louis. The afternoons will be devoted to clinics presented by the above mentioned authorities, and additional lectures will be given each evening after the dinner hour. All members of the Iowa State Medical Society are cordially invited to attend any or all of these meetings. The registration fee is five dollars, and further details may be secured by writing Dr. J. D. McCarthy, 1036 Medical Arts Building, Omaha, Nebraska.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

DIET IN SINUS INFECTIONS AND COLDS—By Egon V. Ullmann, M.D.. formerly special lecturer for biology at the Oregon State College. Recipes and Menus by Elza Mez. The Macmillan Company, New York, 1933. Price, $2.00.

FETAL, NEWBORN AND MATERNAL MORBIDITY AND MORTALITY—A publication of the White House Conference on Child Health and Protection. D. Appleton-Century Company, New York and London, 1933. Price, $3.00.

HEALTH AND ENVIRONMENT—By Edgar Sydenstricker, chief statistician, United States Public Health Service; director of research Milbank Memorial Fund. McGraw-Hill Book Company, New York and London, 1933. Price, $2.50.

INTERNATIONAL CLINICS, Volume III, Forty-third Series—Edited by Louis Hamman, M.D., visiting physician, Johns Hopkins Hospital, Baltimore, Maryland. J. B. Lippincott Company, Philadelphia, Montreal and London, 1933. Price, $3.00.

LIFE BEGINS AT FORTY—By Walter B. Pitkin, professor in journalism, Columbia University. McGraw-Hill Book Company, New York and London, 1932. Price, $1.50.

RECTAL DISEASES IN OFFICE PRACTICE—By Lawrence Goldbacher, M.D., chief of the Department of Proctology, Women's Homeopathic Hospital, Philadelphia. Illustrated with 176 half-tones and line engravings, some in colors. L. Aubrook & Company, 1933. Price, $9.75.

SURGICAL CLINICS OF NORTH AMERICA—Volume xiii, No. 4, Mayo Clinic Number, August, 1933. Per clinic year, February, 1933, to December, 1933. Octavo of 215 pages with 65 illustrations. W. B. Saunders Company, 1933. Price, paper, $12.00; cloth, $16.00.

THE HISTORY AND EPIDEMIOLOGY OF SYPHILIS—By William Allen Pusey, A.M., M.D., LL.D., Emeritus Professor of Dermatology, University of Illinois. Charles C. Thomas Publishing Company, Springfield, Illinois, and Baltimore, Maryland, 1933. Price, $2.00.

100,000,000 GUINEA PIGS—Dangers in Everyday Foods, Drugs and Cosmetics—By Arthur Kallet of Consumers' Research, Inc., and F. J. Schlink, of Consumer's Research, Inc. The Vanguard Press, New York, 1933. Price, $2.00.

BOOK REVIEWS

OPERATIVE SURGERY

By Warren Stone Bickham, M.D. and Phar.M. (Tulane), M.D. (Columbia), F.A.C.S., Former Surgeon in charge of General Surgery, Manhattan State Hospital, New York; and Calvin Mason Smyth, Jr., B.S., M.D., F.A.C.S., Assistant Professor of Surgery, Graduate School of Medicine, University of Pennsylvania. Volume VII, including General Index to complete work, Volumes I-VII. 849 pages with 765 illustrations. W. B. Saunders Company, Philadelphia and London, 1933. Cloth, $10.00.

Volume VII of Bickham's Operative Surgery is indeed a most valuable contribution to surgical literature. The book is replete with excellent illustrations, delineating most accurately the newest operative procedures in the domain of general and special surgery. In this supplement the editors have attempted to bring up to date and to summarize those operative procedures that are now considered thoroughly established. This work does not in any way supplant the previous six volumes, which are already a part of this system.

The editors are to be commended for the thoroughness in the preparation of this volume, especially chapters two, three and four, which deal respectively with the general considerations relating to the patient, the physiologic bearings in operative surgery and surgical measures applied through physical agents.

It is the reviewer's opinion that this book would be a valuable addition to the library of any physician who is doing general and special surgery.

A. G. F.

SENILE CATARACT—METHODS OF OPERATING

By W. A. Fisher, M.D., F.A.C.S., Chicago, professor of ophthalmology, Chicago Eye, Ear, Nose and Throat College, 267 pages, 183 illustrations, 112 of which are colored. Published by the Chicago, Eye, Ear, Nose and Throat College, Chicago, Illinois.

Perhaps in the entire scope of the surgical field there is no more delicate operation than that performed for the removal of cataract. For this reason the operation has been developed by many different authorities with the objective of reducing the operative hazard, of simplifying the operation, and of obtaining better results in the average case.

It is interesting to note that in this volume the author recommends the early removal of cataract, eliminating the "ripening" period during which the patient becomes all but a total invalid, and frequently develops other infirmities complicating the operation. The technic of operation is further simplified so that ambidexterity is not required. This is extremely valuable since few operators can claim true ambidexterity.

The technic of operation is described sufficiently in detail so that the eye surgeon, familiar with the anatomy and physiology of the parts, can readily acquire the suggested technic. The inexperienced operator will find the text a practical guide to the development of technic and experience in this operation.

The volume is thoroughly and adequately illustrated by carefully prepared schematic drawings detailing every essential feature of the cataract operation.

SURGICAL CLINICS OF NORTH AMERICA

Volume xiii, Number 3, Lahey Clinic Number, June, 1933, 275 pages with 98 illustrations. Per clinic year, February, 1933 to December, 1933. W. B. Saunders Company, Philadelphia and London, 1933. Price, paper, $12.00; cloth, $16.00.

This number contains contributions covering a wide range of subjects. Two rather unusual cases of so-called regional ileitis are reported. The selection of operative procedures for various gastric and duodenal lesions is thoroughly discussed.

Gallbladder disease, with especial emphasis on obstructive jaundice, is treated in a comprehensive manner, stressing the value of transfusions.

No Lahey clinic number is complete without a consideration of goiter and surgical diabetes, both of which are well covered. This is an excellent number.

F. W. F.

SURGICAL ANATOMY

By C. Latimer Callander, A.B., M.D., F.A.C.S., Assistant Clinical Professor of Surgery and Topographic Anatomy, University of California Medical School; Associate Visiting Surgeon to the San Francisco Hospital. With a Foreword by Dean Lewis, M.D., Sc.D., LL.D., F.A.C.S. 1115 pages with 1280 illustrations, some in colors. W. B. Saunders Company, Philadelphia and London, 1933. Cloth, $12.50 net.

It appears that at last human anatomy is to be taken from the dissection room and placed in the operating amphitheater. To the reviewer's knowledge no other volume of this sort has appeared, and for this reason Dr. Callander's book should receive prompt and hearty approval by the surgical profession and by advanced medical students.

Dr. Callander does not intend this book to be an encyclopedic treatise of anatomy. He has formed his book around the thought that anatomy, if it is to be surgically employed and understood, should be taught from the surgical viewpoint. With this in mind, he treats first, the embryology and anatomy of the various parts and follows this discussion by one indicating the bearing of these anatomic relations upon the surgical procedures commonly met with and the operations ordinarily performed on these parts. We may take as a typical example, his discussion on the masseter-mandibular-temporal region of the head After presenting the superficial landmarks and superficial structures of the region he describes the masseter muscle and the skeletal framework of the part, concluding his anatomic discussion with a description of the temporo-mandibular joint. Immediately following this anatomic discussion he presents the surgical considerations common to this area. Under this heading he discusses ankylosis and arthroplasty of the joints; dislocations of the mandible and its methods of reduction, and finally, fractures of the mandible, illustrating the three commonest types of this injury. To further clarify the text, the author employs numerous well-prepared drawings and photographs, setting forth not only the anatomic structures mentioned but also the surgical procedures discussed.

Since Dr. Callander's work transforms anatomy from an abstract recital of facts into a practical, living requisite to surgical practice, it is my opinion that his well written treatise will be gratefully received. Denied the privilege of such a course in their medical training most operating surgeons will welcome the treatise as an aid to their daily practice. Without doubt it offers the most helpful approach to a proper understanding of surgical anatomy for the student which has appeared to date and will receive ready endorsement in medical teaching.

This review would not be complete without commendation of the publishers for the excellent bookmanship, manifest not only in the clear print and good paper but especially in the excellent reproduction of the twelve hundred and eighty illustrations.

URINE AND URINALYSIS

By Louis Gershenfeld, Ph.M., B.Sc., Ph.D., professor of bacteriology and hygiene and director of the Bacteriological and Clinical Chemistry Laboratories at the Philadelphia College of Pharmacy and Science. Illustrated with 36 engravings. Lea & Febiger, Philadelphia, 1933. Price $2.75.

Laboratory procedure has shown as great or greater development during the past few years as any phase of medical practice. For this reason, it is timely that a new and up to date treatise on urinalysis should be published. The author of this small volume is well qualified indeed for this authorship since his long experience has permitted him to follow the various technics as they have been developed, and to become acquainted with those which have stood the test of time and are most applicable for general use. Further and more important, it has given him the opportunity to evaluate the various procedures and determine their points of superiority and efficiency and also to measure their shortcomings.

In this volume the author gives in careful detail these various points so that the volume at once becomes an outstanding, useful guide for everyone employing urinalysis as an aid to his work. Its attractive format and convenient size add not only to the attractiveness of the volume, but also to its usefulness. The book is illustrated.

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VOL. XXIII DES MOINES, IOWA, NOVEMBER, 1933 No. 11

MEDICAL CLINICS

DAVID P. BARR, M.D., St. Louis, Missouri

FIRST DAY

THYROTOXICOSIS AND PARATHYROID TETANY

Dr. Harry Collins has brought us a very interesting case this morning, interesting particularly from the standpoint of treatment. She is a married woman, 22 years of age, who was first seen by Dr. Collins in 1931 when her chief complaints were nervousness and loss of weight. Her past history seemed to be negative except that for one year she had had complete amenhorrea. For approximately the same time she had noted that she was nervous and that she was losing weight rapidly. Her weight, which was normally about 125 pounds, fell to 105. She also noted a persistent tachycardia. Three months before 1931 she had had an operation, a thyroidectomy, which was followed by a stormy convalescence. Her voice was affected; she remained emotional, nervous and weak, with tachycardia, marked heat intolerance, tremor and dyspnea on exertion. She frequently had edema of the ankles. In spite of these conditions, however, she gained 40 pounds in weight.

When Dr. Collins saw her, her basal metabolism was plus 36. It was apparent that there had been a postoperative recurrence. As you know, all cases of thyrotoxicosis with diffuse hyperplasia of the gland tend to recur. It is evident that the primary change is not in the thyroid gland. Some other factor is causing the thyroid to become hyperplastic, and to have an increased function.

The factors which determine recurrence are numerous. In the first place, it depends much upon the amount of gland tissue which is removed. Certainly those surgeons who are doing the largest amount of thyroid surgery today insist upon removing practically all of the gland except that which is attached to the posterior capsule. If less than this is removed, the chance of recurrence is greatly increased in seriously thyrotoxic cases.

The age of the patient is significant. The younger the individual, the more likelihood there is of recurrence. The type of goiter is important; the diffusely hyperplastic gland tending to recur, while the recurrences from a toxic adenoma are extremely uncommon.

Another factor, which perhaps has not been emphasized as much as it deserves, is the presence of infection. In younger people with thyrotoxicosis, enlarged diseased tonsils are extremely common. We have repeatedly had the experience of seeing an attack of acute tonsillitis in the course of preparation for operation. Many times tonsils are allowed to remain after the operation for thyrotoxicosis. Repeated attacks of tonsillitis may initiate a recurrence of symptoms.

The recent work of Cole and Womack of Washington University is interesting in this regard. They show that a variety of bacterial toxins in a normal dog will produce in the thyroid gland a picture of hyperplasia, a decrease in the iodine content of the gland, and changes which are similar to those of exophthalmic goiter. This tendency is by no means limited to any site of infection. I recently saw a girl who had already had two operations for thyrotoxicosis and who had a third recurrence initiated by an infection around an ingrowing toenail.

In Dr. Collins' patient, there was, in addition to the signs of recurrence, dyspnea an exertion and edema of the ankles. A certain amount of enlargement of the heart in a thyroid patient is the natural result of the disease itself. With the greatly increased activity of the thyrotoxic individual, there is a tachycardia, an increased pulse pressure, and rapid or deeper breathing. One may expect, if he watches carefully, some increase in the minute volume of breathing in all patients who are thyrotoxic.

I should like to speak a moment concerning the treatment for such a recurrence, and the treatment of thyrotoxicosis in general. We have three

courses open to us: first, management by rest and supervision, with the continuous administration of iodine; second, by operation; and third, by x-ray treatment.

Treatment by rest alone may be justifiable, either originally or with recurrence. This line of treatment should be followed for some time if the disease has started with an obvious infection, because in a few cases, even severe thyrotoxicosis subsides rather rapidly after the infection has been controlled.

All of you are probably agreed that the most effective treatment of thyrotoxicosis is thyroidectomy. In the first place, in the hands of the best surgeons it is relatively safe. The risk is probably not more than one per cent in the large clinics, and in some clinics it has been reduced as low as eight-tenths of one per cent. A period of six weeks to three months may accomplish complete cure; two weeks for preoperative preparation, two to three weeks of convalescence in the hospital, then a rest at home of one to two months. The chance of recurrence under the best conditions is about 10 or 12 per cent. It appears that with adequate removal, 88 per cent of patients with thyrotoxicosis will recover completely from a single operation.

X-ray treatment has been suggested as an alternative. The recent reports of Pfahler in Philadelphia are extremely encouraging, and indeed he records results which are almost comparable to operative procedure. The great difficulty with x-ray treatment is that it demands a high degree of control by the physician and cooperation on the part of the patient. A single x-ray treatment seldom reduces the basal metabolism more than 10 per cent. If the patient starts, then, with a basal metabolism of plus 50 per cent, the best that one can hope for would be recovery after five x-ray treatments. These must be spaced at least four to six weeks apart, so that approximately a half year of observation and control is required. Some glands are extremely resistant to x-ray, so one cannot promise complete recovery either in six months or longer. In the ordinary case of thyrotoxicosis seen without previous operation, operative procedure offers the best chance of recovery.

The conditions are somewhat reversed in the treatment of recurrences.

As you know, the operative difficulties connected with the exploration of a field which has once been explored, are greatly increased. Damage may have been done accidentally, inevitably or justifiably in the first operation. As in this case, the recurrent laryngeal nerve may have been cut or injured. Scar tissue may divide the gland into islands so that although the removal of one mass of tissue may be easy, others equally active are almost unnoted in the mass of scar tissue. The chance of injuring the recurrent laryngeal nerve or the parathyroid glands is greatly increased when an operation for recurrent goiter is performed. Certainly the risk of operation and the risk of complications is greater in the surgical treatment of recurrences. Therefore, it seems worth while, particularly where the basal metabolism is not high, to consider x-ray treatment of the gland. In our experience, some of these cases have been controlled quite satisfactorily over long periods of time by repeated x-ray treatments. Many things interfere with this program; the desire of the patient for operation, the uncontrollability of the patient by the physician, and the inability of the patient to remain under protected conditions for a long time. In this particular case circumstances were such that a second operation was performed.

The preparation that Dr. Collins carried out preceding the second operation on this patient was wise. He put her into the hospital, gave her iodine and fed her abundantly during a period of several days before operation. The preparation for thyroidectomy is perhaps the most important part of the treatment. The best surgeon may have bad results if the patient is improperly prepared. Rest is essential, and we must consider peace of mind as well as mechanical and physical rest. Patients with thyrotoxicosis are particularly likely to be disturbed by family matters and financial worries, and one must attain for these patients a certain calmness and resignation, if they are to be in the best condition for operation. Proper feeding, important in any preoperative condition, is most essential in thyrotoxicosis. We recently had a patient with a high basal metabolism, and the history of losing an enormous amount of weight. In the metabolism ward under well controlled conditions we watched her intake of food, and her weight during the preoperative period. We found that by giving her 5,000 calories per day, which she ate with avidity, we were just able to maintain her weight. She was a little woman, and ordinarily would have required not more than 2,200 or 2,500 calories even under working conditions.

It has been frequently shown that one effect of thyrotoxicosis is to deplete rapidly the liver of glycogen. In some severe cases it has been demonstrated that the liver has no store of available glycogen. I have little doubt that the operative mortality in the past has depended in con-

siderable part upon the depleted store of glycogen in the liver and possibly also in the heart.

The other most important factor in the preparation of thyroid cases for operation, is, of course, the use of iodine, with which you are all familiar. You all know the initial effect. If a patient has never taken iodine previously nothing is apparent clinically for about three days. On the fourth or fifth day the basal metabolism starts to fall. The pulse rate is lower. The patient is more calm and may begin to gain weight for the first time during observation. The fall in the basal metabolism and the pulse rate continues for a variable period, reaching their lowest levels sometime between the seventh and the twenty-first day. It may then remain unchanged for a period of two weeks or more and then rise, seldom reaching, however, levels as high as those which were observed before iodine was given.

The proper use of iodine almost eliminates the danger of postoperative thyroid crisis, previously the great fear of all surgeons. However, thyroid crisis may occur in patients who are operated upon after long continuous use of iodine. The time when protection is most complete is in that period of two weeks when, after the administration of iodine, the basal metabolism has reached its lowest point. The risk is definitely increased in those who have had iodine continuously for a long period before the operation is done. This is an important point, because in these days, with the common use of iodized salt, and with the diffusion of knowledge concerning the efficacy of iodine in the treatment of goiter, we see few patients who have not taken considerable amounts of the drug.

An important question is how long a patient must be without iodine before we can expect to observe again an effect from the re-administration of the drug. The question has not been completely answered but it appears that the period varies between one and three months. Ordinarily in such cases, we stop the administration of iodine for a period of two months before admitting the patient to the hospital. The most exact way of judging whether the iodine has its optimum effect is by means of the basal metabolic tests. Probably more important to the skilled observer is the condition of the pulse, the pulse pressure, the state of mind of the patient, and the tendency to gain weight.

This patient apparently was well prepared. Her operation was accomplished without postoperative complications. The convalescence started well. There were, however, some unfavorable features. The pulse rate remained high; she was very nervous; her tremor did not decrease; she lost weight, and her basal metabolic tests remained between plus 35 and plus 38.

Such symptoms, as you know, are not particularly important during the first two weeks or sometimes the first three weeks following the operation. Presumably the manipulation of the thyroid gland pours out thyroxin into the system. Thyroxin is an extremely slow acting drug whose effect is not apparent for from eighteen to twenty-four hours after it is injected intravenously. Its maximum influence is appreciated three days after injection, and the effect may still be apparent two weeks after the drug has been given. In this case, however, the symptoms of thyrotoxicosis have persisted until the present time.

Another unfavorable symptom following the operation was a great irritability of muscles. Tapping on the cheek caused a contraction of the facial muscles on that side. Pressure of a blood pressure cuff or pressure over the nerve of the upper arm caused the hand to go into the carpal spasm of tetany. Spontaneous carpal and pedal spasms were seen. It was found that the calcium was 6.3, the normal being 10. The patient was immediately treated. She was given parathormone, calcium salts and viosterol. These are the usual remedies in the treatment of tetany and deserve some comment.

The discovery of parathormone was hailed with great hope because it was thought that it would supply a deficiency of parathyroid secretion in much the same way that insulin has helped us in pancreatic deficiencies. Parathormone in parathyroidectomized animals will cause an immediate return to normal, and is often effective in controlling the acute manifestations of parathyroid tetany following thyroidectomy. Long continued use of the drug, however, seems to establish a certain tolerance, which has been observed in some animals, and in rats occurs within a few days following the first administration. Parathormone alone cannot be depended upon to control tetany over long periods of time.

Calcium salts were known to have a beneficial effect in parathyroidectomized animals long before they had extensive clinical application. Calcium lactate, calcium gluconate or calcium chloride may be employed. Calcium lactate is a convenient drug. It is to be taken in large amounts, in doses of two grams several times a day. Usually it has no deleterious effect on the gastro-intestinal tract. Calcium gluconate is advantageous because it may be given intramuscularly. It has been expensive, but at present one may purchase

calcium gluconate from several drug houses, at almost the same price as calcium lactate. I am not sure it has any advantages over calcium lactate when given by mouth.

Calcium chloride accomplishes a curious effect. Once we had a patient with parathyroid tetany which we were unable to control with 200 units of parathormone or enormous doses of calcium by mouth. Although we later proved that this patient was absorbing large amounts of the calcium, the tetany continued and threatened to become dangerous. We introduced a small amount of calcium chloride intravenously. The beneficial effect was immedate. This phenomenon has been observed by many others. In cases of parathyroid tetany which are uncontrollable by other means, calcium chloride may be a life-saving measure.

Viosterol is a logical drug to use. As you know, when given in large amounts it causes an elevation of the calcium. It has been observed to have some beneficial clinical effects in partial tetany. It seems quite possible, however, that viosterol exerts its calcium-raising effect through its action on the parathyroid glands, which if completely removed may render viosterol ineffective.

As I said, this patient received parathormone, calcium salts and viosterol, and under this treatment her blood calcium rose to 10.1. Such beneficial effects are often observed in cases of postoperative tetany.

There are two circumstances under which tetany arises following thyroid operation. One is immediate and may be due to the massive removal of parathyroid tissue at the time of operation. The other occurs four to six weeks later, and is attributed to the formation of scar tissue around blood vessels and remaining parathyroid tissue. Tetany immediately following operation is ordinarily of good prognosis. Tetany developing after an interval is controlled with great difficulty.

I should speak of other aids in the treatment of parathyroid tetany. When the parathyroids are removed, calcium deficiency is the important factor. There is no acidosis and no alkalosis. On the other hand, we know that the tetany may be produced in a normal individual by alkalosis. This may be accomplished in several different ways. Any of you could produce tetany in yourselves this morning, if you decided to breathe very deeply and very rapidly for a period of a few minutes. You could induce symptoms indistinguishable from those which could be demonstrated on this patient. An infant with pyloric stenosis, vomiting up large amounts of hydrochloric acid will have similar symptoms because of alkalosis from loss of hydrochloric acid. The same thing can be accomplished by massive injections of sodium bicarbonate. This is important, because, while the parathyroid tetany is not due to an alkalosis, the administration of acid may be effective in controlling minor manifestations of the disease, and particularly in controlling severe attacks.

Acid may be administered in one of two ways. The first method is very simple. Rebreathing or the breathing of carbon dioxide mixtures, which you are now using in your postoperative cases, will often control the minor symptoms of parathyroid tetany. Another method is the administration of ammonium chloride in doses of perhaps two grams several times a day. This may be administered in capsules and is usually well tolerated, although it may have a somewhat irritating effect on the gastro-intestinal tract.

This patient stopped all medication about two months ago, and has had a partial return of her symptoms of tetany. I do not know whether we can demonstrate some of those present. I think that some of you who are in the front of the room can hear her breathe. She breathes with a definite stridor. Will you tell us where you live?

Patient: Union Apartments, Ninth and Locust.

Dr. Barr: You see there is considerable hoarseness. When she breathes I can feel the air going in and out. There is in this case an involvement of both recurrent laryngeal nerves, so that the cords approximate each other. There is a marked tremor. The pulse is rapid, the hands are hot, the systolic blood pressure is elevated, and thyroid tissue can be felt in the neck. There has been no evidence of a tumor in the mediastinum which might indicate that thyroid tissue is hidden in the mediastinum, yet this patient presents the features of thyrotoxicosis.

(Patient is dismissed)

The most remarkable thing about this case is that at the time of the second operation, when she was definitely thyrotoxic, no thyroid tissue was found in the neck. Since no tissue was removed, it was to be expected that her symptoms would persist. Particularly interesting in this regard is the case recently reported by Phemister of Chicago. A patient presented severe signs of thyrotoxicosis, had several operations, but finally died as a result of this condition. At autopsy no thyroid tissue could be found anywhere. Serial sections were made of the neck and mediastinum. Careful examinations were made of the back of the tongue. Search was made for thyroid

tissue in the ovary. Phemister's case remains unexplained. It seems unlikely that such cases occur frequently, but the possibility of a similar condition in this patient may be considered. Certainly it would be interesting to examine the back of this patient's tongue and search for a mass of thyroid tissue there.

Dr. Collins' patient is suffering from a combination of two conditions; an only partially treated tetany, partially treated because the patient has discontinued her medication, and a persistent thyrotoxicosis. It seems important that she should be urged to continue her calcium therapy, to avoid parathormone as completely as possible, and to take large amounts of viosterol. I think it is also important that her neck and her mediastinal region be thoroughly x-rayed at intervals of six weeks, in the hope of catching in that region some focus of thyroid tissue which may still be causing her symptoms. One might hesitate since she already has a tetany and an apparent parathyroid insufficiency. The question may well be asked if we will not cause atrophy of the remaining parathyroid tissue. The question cannot be answered at the present time. We know, that at least some parathyroid tumors are sensitive to the x-ray. On the other hand, as far as I can discover from a rather extensive review of the literature, there are no cases of tetany reported from the use of x-ray treatments on the neck, a procedure which has been used extensively for thyroid and laryngeal conditions. It seems proper in this case to try the effect of x-ray therapy.

SECOND DAY

PITUITARY CACHEXIA AND ADDISON'S DISEASE

The first patient this morning was brought to us by Dr. Walter Abbott who has been watching him for some time. This is a boy, sixteen years of age. He says he was well until the age of six. Until that time he played on equal terms with other boys of his age. He then had some vague trouble, the exact nature of which cannot be determined from the history. An operation was performed. Eleven inches of his intestines and his appendix were removed. Thereafter he was not well. He suffered from weakness and began to have headaches which gradually increased in severity until they became almost intolerable and interfered greatly with his school work.

At school he was regarded as a recalcitrant pupil; he was often punished in minor ways, and was made to feel inferior. He attributes his difficulty to his headaches. He came to Dr. Abbott with a possible diagnosis of brain tumor, his chief complaint being frontal headache, which seemed to be unrelated to any circumstances of his life, except that it was exaggerated by exercise and was relieved rather easily by aspirin.

He suffered continually from chronic constipation. Aside from his headache, the most prominent subjective symptom was fatigue. His family complained because he failed to grow. He himself does not know at what age his growth stopped, but he is certain that during the last two years he has not changed in height. The family was disturbed also because he failed to develop pubertal changes.

We can examine him briefly here. He is sixteen years old, five feet two and one-half inches in height, but his weight is only 89 pounds. When Dr. Abbott first saw him, his color was more pasty than it is now. He is pallid, his skin is delicate, as soft as a baby's. There are already, I think, a few wrinkles appearing about the eyes, due to the delicacy of the skin. His hair, which has had some treatment, is said to be dry, and is as fine as a woman's. There is no evidence, at the age of sixteen, of the growth of a beard. One sees a little lanugo hair over the chin and sides of the face. There may be the slightest hint of a mustache, but hardly more than could be expected of a boy before the age of ten. Observe the extremely slender build. The hands and feet are cold and cyanotic, a symptom which at times has been troublesome. I think some of you who are in the front of the room can see the extreme cyanosis of the nail beds, which is independent of weather and may occur even when he is in a warm room. We see here the ugly scar of the operation which he had at the age of six. Evidently infection took place around the wound.

There is almost complete failure of the development of pubertal changes. The sex organs are those of a child of seven or eight. The testes are descended, easily felt, but have not developed with puberty.

His blood pressure is 108/88. At one time he was observed to have a blood pressure of 92. The basal metabolism, quite surprisingly, is entirely normal. There is an anemia, a blood count of 2,400,000, with 80 per cent hemoglobin. His Wassermann reaction was negative.

An x-ray of the skull shows an interesting thing. There is no convolutional atrophy. There is no enlargement of the sella turcica, no evidence of destruction of the clinoid processes, but in the exact center of the sella, one may see an irregular area of calcification, a change such as might result from necrosis or cyst formation which had later become calcified. The question in

this case is why he did not develop secondary sex characteristics, why he did not grow, why his blood pressure is low, and why he suffers from headache and fatigue.

Simmonds, a German, in 1914, at the very beginning of the late war, described a condition which was characterized by loss of weight, great muscular weakness, loss of teeth and of the hair of the body, producing an appearance of extreme senility, even in young people. In men there was a loss of all sex power and desire, with atrophy of the testes; in women, amenorrhea with atrophy of the uterus. There was indeed an atrophy of all organs, which was more extreme, however, in the thyroid, the suprarenals, the testes, and the ovaries.

A study of later cases of this same condition showed a low basal metabolism in a large number of cases as well as a low blood pressure. The basal metabolism was occasionally found to be as low as in complete myxedema, rates of minus 35 and minus 40 being recorded.

The blood pressure tended always to be low, but, occasionally, after the patient had undergone some strain or had been exposed, or had an infection, the blood pressure might fall to low levels during which the patient would suffer a collapse, not unlike an Addisonian crisis.

In the course of the last twenty years, since Simmonds described this condition, a number of cases have been reported. It attracted little attention in this country until the last few years. Recently we have had an excellent article by Calder in the Johns Hopkins Bulletin. The pathology is variable. Always there is a lesion involving the anterior lobe of the hypophysis, which in certain instances, has been carcinomatous, either from local malignant disease or metastasis. In some cases there has been tuberculosis. In a very few, syphilis has been a factor. Atrophy of the pituitary gland has also been observed, and cysts have been seen. One of the most interesting causes arises at the end of pregnancy. In the course of a stormy puerperium, emboli may occur in many parts of the body. Since the anterior lobe of the pituitary gland is supplied, in most cases, by a single artery, an embolus strategically placed in that artery may cause complete destruction of the anterior lobe of the hypophysis, without any change in the posterior lobe or in the surrounding structures of the brain. Perhaps more cases of Simmonds' disease have occurred following pregnancy or have occurred with embolus and secondary atrophy, than from any other cause.

In 1919 Simmonds described a pituitary lesion in a dwarf of the type which had previously been described by Levy and by Lorain. These cases were characterized by abrupt cessation of growth and sexual development without striking mental retardation; have been found to have low blood pressure, and in the few instances which were studied, a low basal metabolism. It was surprising, however, that in spite of these signs of debility, they did not usually exhibit great cachexia. Such dwarfs have been able to lead a quite normal life; at least two have lived to great age. Falta described a dwarf, extensively studied in many clinics, who lived to the age of ninety.

Through the courtesy of Dr. Max Bahr, I saw in Indianapolis last fall, the record of Amelia Parent, a rather famous dwarf who traveled for many years with the circus, and who died at the age of fifty-six. In Falta's dwarf and in Amelia Parent, it was found, at the postmortem examination, that no anterior lobe tissue was present. In both instances the anterior pituitary gland had been completely destroyed. In other similar dwarfs, including the patient originally described by Simmonds, destructive lesions of the anterior lobe of the pituitary gland have been found.

The diagnosis in this case, I think, is Simmonds' disease, occurring in childhood and resulting in partial pituitary dwarfism. Certainly there is evidence of deficiency of the anterior lobe of the hypophysis, with secondary insufficiency of the thyroid gland, possibly accounting for the dry hair, and with insufficiency of the suprarenal gland, accounting for the low blood pressure. The case does not, however, present the complete picture of anterior lobe insufficiency. Some of the cases (we have one under observation at present at Barnes Hospital) show basal metabolisms as low as minus 35, alarming attacks simulating Addisonian crisis, marked cachexia and extraordinary weakness. It seems possible either that there is only partial anterior lobe insufficiency or that the insufficiency is complete and presents the partial clinical picture of other cases developing in childhood.

It is interesting that this boy has been given specific therapy; whole pituitary gland by mouth, and more recently, antuitrin by injection. It is questionable whether today we have any positive evidence that pituitary preparations taken by mouth are effective. For the most part, they contain many pituitary principles, perhaps in highly variable proportions. The assay is by no means complete. We cannot say positively that they are ineffective. We know at present that theelol can be taken by mouth very effectively.

We know that ovarian residue, which was looked upon as a rather useless thing, has a beneficial effect in the periodic swelling of the female breasts. We cannot say that pituitary preparations by mouth are useless, but we certainly do not know that they are effective.

Antuitrin S has an interesting history. As you know, it is also called prolan and is a product of pregnancy urine. It is probably the substance which is responsible for the Ascheim-Zondek test for pregnancy. It possesses many of the properties of the sex hormone of the anterior lobe of the hypophysis, but is not identical. The sex hormone of the hypophysis has been known, since 1927, to be responsible for the development of the sex organs both in the male and the female. Without it, otherwise normal ovaries and testes do not develop. With it, in large amounts, the organs may develop far before the time of puberty.

We know the pituitary-like substance from the urine can be prepared rather easily in the laboratory. It is obtainable under several names, such as Antuitrin S from Parke, Davis and Company, and as Follutein from Squibb. Although the majority of preparations can be demonstrated to be physiologically active, it is questionable whether the standardization is as yet entirely dependable. In a case of this kind, it seems entirely rational to use this preparation. We assume that this boy has an insufficiency of his anterior pituitary gland, and we have a substance which is like the sex hormone, and which we know will stimulate the development of normal testes in animals. It was perhaps for these reasons that Antuitrin S was given to this boy. It is interesting to note that the headaches have become less frequent, his outlook on life has improved, his appearance and attitude has changed, both to his doctors and to his friends. No definite sex development and no definite growth phenomenon has been noted.

In giving Antuitrin S, we must remember that we are furnishing only one of the several hormones which are known to arise from the pituitary gland. Presumably he is getting from it no growth hormone, no thyrotoxic hormone; he is receiving only a sex stimulating hormone from urine which may or may not accomplish exactly the same response as could be obtained from the sex hormone of the pituitary gland itself.

I shall ask Dr. Collins to read the history of the next case.

Dr. Harry A. Collins: The second case for our consideration is that of a male, fifty-seven years of age, an attorney by occupation, who was first seen June 8, 1932, with the chief complaint of generalized weakness, loss of appetite and discoloration of the skin of the face and the backs of the hands. He was treated surgically for a carbuncle on the back of the neck in 1930 and has not felt well since that time. In the year prior to the time that I saw him, he became gradually and progressively weaker. It was difficult for him to carry on his usual occupation, and in the three or four months prior to his examination here, bronzing of the skin became more marked. He had lost about seven pounds in weight. His blood pressure ranged from 105 systolic and 80 diastolic to 90 systolic and 70 diastolic. His blood sugar, blood count and urinalysis were normal. There was absence of free hydrochloric acid in the stomach. His blood urea nitrogen was 10 mg. per 100 c.c. From June 8 to July 15, 1932, the patient was treated according to the Muirhead régime. His clinical course was definitely unsatisfactory. He became nauseated, vomited occasionally, and grew much weaker. The pigmentation increased. His blood pressure remained about 90 systolic over 68 to 70 diastolic. For several weeks his life was despaired of because of persistent hiccough which continued for at least three weeks. Along with this he had a very severe throat infection. By gradually increasing the dose of eschatin, it was possible to carry him through this crisis.

From July 15, 1932, until the present time, he has been on eschatin intramuscularly, the doses ranging from 40 units twice daily to 400 units a day. During this time he was carried through the infection that I mentioned, and the hiccoughs, while most harassing and most annoying, subsided after the use of encephalitic serum.

At the present time the patient is active, up and about, eating very well and taking on an average of 400 units or 10 c.c. of eschatin intramuscularly every day. I have unsuccessfully attempted to reduce the dosage. He immediately becomes nervous, loses his appetite, and in each instance where the dose has been reduced, the hiccoughs have returned. I have found it necessary to continue these massive doses in order to maintain him at a level at which he can now be active.

Dr. Barr: It was hoped that this patient could be here this morning. Dr. Collins tells me that yesterday the expected shipment of eschatin did not come from Parke, Davis and Company, and last night the patient began to hiccough. Since he does not feel well, it seems inadvisable to permit him to leave his home.

The subject of Addison's disease is, however, sufficiently timely to justify a discussion of some

of its aspects. I have no doubt that the case which Dr. Collins had presented is one of Addison's disease. As you know, the principal diagnostic criteria are four: asthenia, pigmentation, feeble circulation with low blood pressure, and gastro-intestinal symptoms, varying from loss of appetite, disgust for food, nausea, severe attacks of vomiting, sometimes hiccoughs and occasionally during the more severe phases of the disease, diarrhea. It is well to remember that the diagnosis of Addison's disease is permissible, without these four cardinal symptoms. Blood pressure is usually low, but Dr. Rowntree at the Mayo Clinic observed one patient, later found to have extensive or complete destruction of both adrenal glands by tuberculosis, with a blood pressure of 150 consistently observed until four hours before the patient's death. It also must be kept in mind that, while pigmentation is perhaps the most characteristic feature and the one which usually calls attention to the diagnosis, it may occasionally be absent. Cases of bilateral tuberculosis of the adrenal glands without pigmentation have been reported. Complete destruction of the adrenal glands by carcinoma and other malignant tumors may also be unaccompanied by pigmentation. One must be prepared, then, to make the diagnosis, occasionally, on the basis of extreme asthenia and gastro-intestinal symptoms.

One should speak of the Addisonian crisis. In some respects this is similar to surgical shock. It is accompanied by a dangerous fall in blood pressure. A blood pressure ordinarily obtained in a case of Addison's disease at 100 or 110, may during the critical phase fall to 80, 70, or even 40 per cent hemoglobin. When the blood pressure, in a case of Addison's disease, falls below 70, the patient is in a dangerous state and must be most carefully watched.

During this condition of shock, the hands and feet are cold. There is a demonstrable slowing of blood through the capillary beds. There may be mental disturbances. There is complete prostration and muscular weakness. A very important feature is dehydration. It has been found by studies of Rowntree and Brown that the blood volume is definitely decreased, and the viscosity of the blood is so increased that it may be almost impossible to get blood from a superficial vein.

One of the most interesting features of the Addisonian crisis is the renal insufficiency. The urine flow gradually stops until it may cease altogether. The specific gravity, even of the scanty urine, may be quite low. With this there is an increase in the nonprotein nitrogen of the blood, a sign so constant that it has been considered a measure of the severity of the circulatory collapse. It is not unlikely that these renal phenomena are of circulatory origin and that they do not result from any particular organic damage of the kidney.

Another feature should be mentioned in connection with Addison's disease. There is in some cases, a tendency to hypoglycemia, which Harrop thinks, in certain cases may be the cause of death.

Quite recently new facts of great importance have been discovered. It has been known that adrenalectomized dogs treated with salt solution survive longer than controls. Suprarenalectomized dogs treated specifically with cortical hormone may survive for long periods. If the hormone is withdrawn there is a gradually increasing concentration of the blood, a fall in blood pressure, diminished blood flow, and circulatory collapse, accompanied by a fall in the total plasma base and particularly in the sodium and chloride content of the plasma. Simultaneously there is an increase in the excretion of sodium and chloride by the kidneys. Harrop and Robert Loeb have shown that preceding the Addisonian crisis there is a similar hemo-concentration and diminution in the sodium and chloride content of plasma. These facts seem to indicate that the adrenal cortex has a specific influence on the excretion of water, sodium and chloride.

The treatment is extremely important. A patient with Addison's disease must constantly be protected. It would have been entirely wrong to permit this patient of Dr. Collins to come here this morning. Rest in bed throughout the course of the disease is by no means necessary, but constant surveillance is essential.

It is interesting that there is a postural hypotension in cases of Addison's disease. This is not constantly present but is probably frequent during the time of beginning crisis. A patient flat in bed may have a systolic blood pressure of 110. If he is tipped 45 degrees, his blood pressure may fall to 70 or 80. In one case that we observed, tipping to a vertical position caused a fall in blood pressure to 40. When there is any danger of crisis, the patient must be completely recumbent.

This care applies also to physical examination. A patient with Addison's disease should not be too completely overhauled. It is found that exposure to cold often brings on a crisis. Warmth, then is important, although it should not be carried to the extent of causing sweating. Epinephrin, which was the basis of the Muirhead treatment, may be employed. It is interesting, however, that epinephrin does not always affect patients with Addison's disease. Instead of the customary

rise in blood pressure, the blood pressure may remain unchanged after the injection.

Fluids should be introduced during the crisis because of the dehydration and the increased viscosity of the blood. Some bad results have occurred from giving intravenous injections because of reactions to the glucose solution. The patient with Addison's disease is suffering from such a precarious condition that a post-injection chill, may be sufficient to cause his death. Where it is possible, therefore, it is better to give the fluids by subcutaneous injection, hypodermoclysis. In many cases it is necessary to give glucose by vein. If this is done, extreme care should be taken in the preparation of the injected fluid.

The chief interest in Addison's disease today resides in the consideration of the new cortical hormone which we now have at our disposal. It is very expensive. Great difficulty has been encountered in its preparation. Swingle and Pfiffner at Princeton, and Harrop at Johns Hopkins University, were able to prepare batch after batch of the cortical hormone each of a sufficient potency. As soon as an attempt was made to prepare it on a large scale, commercially, unanticipated and somewhat unexplained difficulties were encountered. The method has been changed so that the whole gland is used instead of the cortex. Now I think it is safe to assume that on the open market we can get eschatin, cortical hormone, which contains at least 20 dog units per c.c. The dosage for the average case has been from 1 to 2 c.c., from 20 to 40 units twice a day; 40 units a day in some instances maintaining a patient who presents advanced symptoms of Addison's disease.

The cortical hormone is an extremely curious substance. If it is lacking, life is not possible; if it is present, an excess causes no demonstrable effects. Doses ten to fifty times that which is calculated for daily needs have been injected without any toxic symptoms. Normal animals and normal individuals have been studied repeatedly for some effect of the eschatin on the physiologic processes of the body. We do not have a single criterion for the physiologic effect of eschatin except in those cases where there is none in the body. In this way it is like the vitamins. If Vitamin C is needed, scurvy develops. If sufficient Vitamin C is present, gross excess of the substance may be taken without symptoms.

Eschatin is best given by subcutaneous injection. It usually is not irritant. Intravenous injection has been used frequently and without any harm during the Addisonian crisis. It probably is a less effective way of giving it than the subcutaneous method, possibly because of the rapid excretion of the drug before it has had an opportunity of reacting with the body tissues. So far, eschatin is not as satisfactory a preparation as insulin. Patients with diabetes, even young ones, can be restored to complete health and normal activity by the use of insulin. Few, if any, cases of Addison's disease have completely recovered their strength, normal blood pressure or normal circulation, even under heroic doses of eschatin. Their weight remains lower than normal, and blood sugar is often low, after adequate treatment with the drug. Although in certain instances, this may be due to the simultaneous presence of tuberculosis, it has also been observed in cases in which atrophy of the suprarenal gland was the cause of the disease.

This particular patient that Dr. Collins has presented takes an extraordinary amount of the drug, 400 units, 10 c.c., morning and night. His drug bill, Dr. Collins tells me, is around $350 a month. Fortunately, very few patients have needed so much. It seems possible that an application of the newer work by Harrop and Loeb on the relationship of sodium chloride to cortical function might be most important in the treatment of this case. These observers have found that patients receiving large daily amounts (1 to 6 grams) of sodium chloride require less eschatin and may in some cases be maintained indefinitely without the use of the cortical hormone.

One other point should be made. A patient may be easily controlled during the early disease with small doses. After one crisis, he may still be easily controlled, but with each succeeding crisis, it appears that certain fundamental damage is done to the body and possibly to the suprarenal glands themselves, so that the effect of each dose lasts a shorter time, and the general dosage has to be increased sometimes enormously, in order to exert any sort of control over Addison's disease.

LABORATORY TECHNIC AND THE PRACTICE OF MEDICINE*

Allen C. Starry, M.D., Sioux City

Clinical laboratory medicine has advanced so rapidly in the past ten years that few physicians, in their daily routine, have time to consider the actual technic involved in carrying out any special laboratory test. In many conditions the physician must have certain laboratory work done before he can actually come to a final diagnosis. The clinical pathologist may furnish certain results of labora-

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tory technic and even their proper interpretation, but we must keep in mind that only the attending physician has the opportunity of seeing the complete clinical picture of the patient, and therefore, the final diagnosis must rest with him.

Laboratory technic has become vast and complex. We now see whole reference books given over entirely to laboratory technic alone, and others to their interpretation. It is impossible for any physician to commit himself to long lists of technical procedures or even to interpret such findings. This falls within the realm of the clinical pathologists. In this paper I wish to discuss laboratory technic insofar as it involves the routine practice of medicine; to that portion where the two fields must of necessity overlap. The paper is not complete; it merely includes a few of the more important fields.

First, I would direct your attention to the importance of blood examination. The technic of blood counts is familiar to every physician and I need not dwell upon the procedure. However, there is one phase of making smears for differential counts that needs discussion. One can use the two-cover glass method or the two-slide method. Both have grave disadvantages. The first of these gives good results in experienced hands but the cover glasses are thin and small, causing much difficulty in manipulation and often loss of specimens due to breakage. The two-slide method is unsatisfactory because by this method the distribution of leukocytes is very uneven or they may be pushed to the sides of the slide and, as a result, the differential count is not accurate. However, with the two-slide method, if the slides are clean, and a drop of blood is obtained, and the smear made rapidly, the cells will be more evenly distributed. If much time elapses, however, after the blood is drawn, the white cells come to the surface of the drop and are held there by surface tension. As a result the leukocytes are usually distributed at the edges or at one end of the slide. A method recently described by Kato† gives very good results and the procedure is simple. He uses a clean slide and a large cover glass 24 by 50 mm. The drop of blood 3 to 5 mm. in size is placed toward one end of a clean slide. The cover glass is laid over the drop immediately and the blood is allowed to spread into a circle of thin film by the weight of the cover glass. No pressure should be used to spread the blood. When the blood is spread the cover glass is quickly drawn across the slide toward the other end. This will give an oval of thin film on the slide. Air dry, and the slide is ready to stain. You will find that the leukocytes are evenly distributed, providing the cover glass and slide are clean. A little practice will give good results with this method.

In the matter of blood chemistry the physician must keep certain things in mind if he is to collect the specimens intelligently. Blood chemistry findings are valuable to show what is taking place on the other side of the kidneys; but such findings are of value only when the blood is collected and properly preserved. In collecting blood for nonprotein nitrogen, urea nitrogen, uric acid, creatinin, or a blood sugar test, the blood should not be allowed to clot. Always have at hand a few sterile tubes containing about 5 mgs. of lithium or potassium oxylate. Usually an amount which can be carried on the end of a pen knife is sufficient to prevent three to five cc. of blood from coagulating. The blood need not be kept sterile if the chemistry is done within a few hours following withdrawal. Usually five cc. of blood is sufficient to carry out a blood urea, nonprotein nitrogen and blood sugar test on the same specimen. In obtaining blood for a blood sugar always keep in mind the fact that glycolysis continues unless a preservative other than an anticoagulant is added. If blood is placed in a tube containing enough potassium oxylate powder to prevent coagulation and allowed to stand four to twelve hours most of the blood sugar will have disappeared. I have frequently run sugar on blood sent to the laboratory within eight hours and would find scarcely any sugar. There are a number of preservatives that will prevent glycolysis. A mixture of sodium fluoride and thymol is effective. The following mixture is recommended:

Sodium fluoride c.p.	3 parts
Thymol crystals	1 part
Potassium oxylate c.p.	3 parts

Powder thoroughly and mix. Ten mgs. will keep three cc. of blood for a period of twenty-four to thirty-six hours with very little change in the blood sugar. This is usually sufficient time in which to transmit the specimen to the laboratory for the determination. If there is any delay always keep the blood in the ice box. Sodium fluoride interferes with the urea determination because it kills the urease. So if you desire a urea and sugar on the same specimen of blood, divide it and put one part in a tube containing an oxylate only, to prevent coagulation. Always mix the blood and anticoagulant or preservative immediately, otherwise part of the blood may coagulate. For calcium or phosphorus, place the blood in a clean test tube without any preservative or anticoagulant. We frequently receive blood for calcium to which oxylate has been added. This precipitates out the calcium and makes the determination impossible.

†Kato, K.: A method of preparing blood smears. Jour. Lab. and Clin. Med., xviii:527-529 (February) 1933.

Blood cultures are of particular value in making an early diagnosis in typhoid or undulant fever. In fact, blood cultures should be taken from any patient with an unexplained temperature. In obscure endocarditis cases, cultures are of great value. Sometimes one is surprised to find a hemolytic streptococcus present or a blood culture positive for streptococcus viridans. In taking blood cultures always use bacteriologic technic. Use syringes and needles sterilized in an autoclave and not by boiling. It is not unusual to receive blood cultures contaminated with spore-bearing saprophytes. The skin over the cubital vein should be cleaned first with soap and water, then with 70 per cent alcohol, and finally with tincture of iodine. As soon as the blood is added to the proper media it should be transported at once to the laboratory. Many times exposure to fluctuating temperatures and the more or less constant shaking of the tube in the mails lead to poor results. Best results are obtained when the patient is taken to the physician's laboratory where the blood is drawn and incubated at once.

In the diagnosis of syphilis we have several laboratory procedures. For syphilis other than the primary stage we rely on some form of the Wassermann test and some type of precipitation test, such as the Kahn or Kline test. Usually, the physician becomes confused when he attempts to invaluate these various complement fixation tests. Even a brief review of the literature will show the enormous amount written about the serodiagnosis of syphilis. There are numerous technics and variations of technics sponsored by various authors and laboratories. It is hoped that out of all this will finally grow a standard technic that will be more universally accepted. Even then, we can only hope to approximate comparative results of one laboratory with another. First of all, the physician must remember that none of the laboratory tests for syphilis are specific. We do not use an antigen made from the etiologic agent of syphilis but rather an extract of animal tissue, usually from dried beef heart. All steps in the technic have been arrived at by the trial method and the method giving the most constant results is then selected. Due to these facts, slight variations in technics may cause variations in the results. Perhaps this will explain why two laboratories will sometimes not agree. Whether the serum has been inactivated fifteen or thirty minutes at fifty-six degrees centigrade may make a difference in the final readings. Ice box incubation instead of water bath incubation may make for a more sensitive test. The way the antigen is diluted in the salt solution, the amount of the patient's serum, the number of units of each reagent, or the degree of activity of the complement may lead to somewhat different results. I have noted, on several occasions, that blood drawn in the laboratory, when compared with blood drawn from the same patient but mailed from a far distant point, will give different results.

From what has been said it should be obvious that every clinician should have a very definite idea of the serodiagnostic methods employed by his laboratory. He should know whether a cholesteranized antigen or an acetone insoluble antigen is used; whether a long or a short incubation period is employed. Above all, he should not select a method just because it is rapid. So far as the outcome of the patient's syphilis is concerned a day or two, one way or the other, is not going to make any difference. It is a chronic infection and one that requires many months of treatment at best. In fact, I believe that the eighteen to twenty-one hour ice box methods are more sensitive and tend to give a higher percentage of 4 plus reactions and less of the 1 plus or 2 plus reactions. In this respect, I have found Kolmer's technic very satisfactory.

I would discourage the use of many antigens. It is confusing to give out results with various antigens, especially when there is absolute disagreement as a 4 plus with one and negative with another, or even relative agreement, as 4 plus with one and 1 plus with another. Many will call and ask what it means or whether they should abide by one reaction or the other. Instead of using the three separate antigens, it is much better and less confusing to use one, such as Kolmer's antigen, which contains the essential elements of all three. At least a cholesteranized antigen should be used. The test should be fairly sensitive and able to pick up bloods containing a relatively small amount of syphilitic reagin and at the same time be relatively free of false reactions.

In considering false positive or negative reactions there are a number of facts to keep in mind. In the first place, syphilitic antibodies must be present before they can be detected. Syphilis is a chronic infection with a great tendency to become latent. The spirochetes may be present without necessarily causing any great tissue reaction. Their activity may be so low that the tissue does not react sufficiently to produce antibodies in any detectable amount. If they are not present in such amounts, of course no technic will reveal them. Falsely positive reactions are rare unless a supersensitive technic is used. I have had only a few instances where falsely positive reactions occurred and most of these cases later proved to be syphilitic. However, in all cases, where a falsely positive reaction is suspected a careful

serologic study should be instituted. Here repeated Wassermann and precipitation tests should be done at varying intervals of time. If the Wassermann reaction is persistently positive over a period of time a diagnosis of syphilis should be made. If only one positive reaction is obtained and others are negative, that one should be disregarded.

Much has been said in the last few years about the precipitation tests for syphilis, especially the Kahn, Kline, and Hinton tests. These tests are usually regarded as more sensitive than the Wassermann test. Due to the fact that the precipitation tests are more simple and require only the antigen and salt solution, less variability would occur in different laboratories. While it is true that less variability in the test occurs in individual laboratories, yet the variability between laboratories is just as great as for the Wassermann reaction. This variability is due chiefly to the great variation in antigens and the difficulty in reading results. I might say parenthetically that these precipitation tests on spinal fluids are quite unsatisfactory, at least in my experience. I find that if you average 50 per cent positive on spinal fluids you are really lucky. However, they are valuable tests but should not be substituted for the Wassermann test. No serologic examination is complete without both the Wassermann and at least one of the more generally accepted precipitation tests. I believe the Wassermann test, together with a precipitation test, when properly run, offers a most valuable aid in the diagnosis of syphilis. Even though they are biologically nonspecific they possess an extraordinary degree of practical specificity, so much so that repeatedly positive reactions in this country mean syphilis.

In the early primary stage we must rely for an early diagnosis on the examination of the primary sore. Whether the lesion is genital or extragenital, a careful search for spirochetes should be made at once. The Wassermann or precipitation tests are not positive until after the second to the fourth week and waiting for a positive reaction is valuable time lost. In making this examination one of two procedures can be carried out —the dark field or the stained smear. Many times a dark field is not available and the stained smear can be substituted. When properly stained the organisms can be as easily recognized as under the dark field. In fact, I have found the smear method more convenient at times because smears can be taken any time and stained later at one's convenience. No aniline dye is satisfactory but silver nitrate gives excellent results. Whether a dark field or a smear is made the preparations should be taken before any local medication is done; and this is important. Do not regard a genital sore as something innocent and apply calomel powder, nitric acid, silver nitrate, or any other medication, then a day or so later decide to have an examination made for spirochetes. You have greatly increased the difficulty of finding the organisms and many times made it absolutely impossible. Every genital sore should be examined at once for spirochetes and treatment instituted afterwards. In making dark field preparations, the sore should be cleaned, the clear straw-colored fluid squeezed up, and the preparation made using clean slides and cover glasses. In making smears squeeze up the chancre fluid and make several thin smears on clean slides. Allow them to air dry. Do not flame. They can then be stained with any silver method. Fontana's method gives excellent results. If the patient has been applying self medication and no organisms can be found, have the patient wash the sore in warm salt solution and return twenty-four hours later for another examination. Impress upon him that he should not apply any medication whatsoever during this period.

It is not necessary to dwell on urinalysis, for every doctor carries out such examinations routinely in his office. Likewise, basal metabolisms are well understood, as well as the preparation of the patient for the test. Stool examinations need no comment.

Tests for pregnancy as described by Ascheim and Zondek, or some modification, such as Friedman's, are proving very helpful. A fresh morning specimen is required. The night specimen contains a higher concentration of the sex hormone than any day specimen. The test shows a high degree of accuracy and usually is positive after the second to third week of pregnancy. I have found it very unsatisfactory to mail specimens a long distance, because bacteria grow, the urine becomes decomposed, and the results are not good.

Tissue examination is very important. Due to the complicated technic, tissue examination can be obtained only at large medical centers. Yet the general practitioner may frequently require this examination. We should not overlook the fact that even routine tissue examinations frequently reveal surprising findings. In preparing tissue for microscopic examination there are a few points to remember. Place the tissue in a fixative immediately or shortly after removal. Do not place tissue in distilled water, tap water or salt solution. I sometimes receive tissue that has been placed in tap water, in salt solution, or sometimes placed in gauze, folded up and mailed. Of course, tissue in salt solution spoils in a short time. If it is in tap water, there is a breaking up of the tissue cell,

and examination of the tissue is not satisfactory. The most convenient fixative is formaldehyde. This solution may be prepared by adding one part of 40 per cent formaldehyde to nine parts of physiologic salt solution. If salt solution is not at hand, add one part of formaldehyde to nine parts of tap water and add one level teaspoonful of table salt to each quart of the mixture. If formaldehyde is not at hand place the tissue in 70 per cent alcohol. In sending tissue by mail it is unnecessary to send the tissue in the fixative, but allow the tissue to fix a few hours, then remove the tissue from the fixative, wrap in cotton moistened with the formaldehyde fixative; wrap well in oiled paper; wrap again in dry cotton and place in any tight pasteboard or wooden box and mail. The tissue will keep moist this way and will stand many days without drying. In this manner the weight is much reduced and the danger of breaking glass containers in transit is avoided. Tissue so cared for is satisfactory for sectioning.

In a brief way I have attempted to cover some of the more important and useful points of laboratory technic insofar as they concern the practicing physician.

Discussion

Dr. Aldis A. Johnson, Council Bluffs: In laboratory work I think we get leads just the same as we do in other lines. I appreciate the fact that laboratory work must be correlated with the clinical picture. I have always said that when laboratory work and clinical findings do not agree, they both should be repeated until they do agree.

I think this paper by Dr. Starry has been a good one because there are so many things about laboratories that the general physician has neglected. I do not know of anything that gives me a greater lead, when I come to the laboratory, than a blood smear. Dr. Starry has given you the directions for taking these specimens. I would like to cite a case in which I had a lead. A patient came to the hospital, after seeing doctors in Omaha and Council Bluffs. One thought she had goiter; one thought she had gallbladder disease; and one even thought she had cerebral lesions. The blood smear showed marked stippling of the red blood cells. I learned from the patient that she had been using flake white, or lead carbonate for a number of years. The laboratory, in that case, gave the lead. It was a case of lead poisoning.

Another case of lead poisoning was discovered with the aid of a blood smear. A doctor referred to me a woman with swollen upper eye lids. I thought of trichina and I thought of everything that would cause swelling of the upper eyelids. Upon examining the blood smears, which I always make on a patient of this type, I found something peculiar. I went to the telephone, and called the patient and said, "Have you used flake white?"

She said, "My mother has been using flake white for ten years, and I have used a little of it."

I advised discontinuing the flake white and the condition disappeared at once.

I was very glad to hear Dr. Starry emphasize the examination of the chancre. An old doctor in Council Bluffs, one time asked me, "How do you treat your soft chancres?" I replied, "I treat them as hard chancres."

In every case where there is a lesion that is suspicious, you should look for the spirochetes. I agree with Dr. Starry that you can find them, if the case is untreated, in about 100 per cent of the cases.

Of the incurably insane, thirteen per cent is due to the spirochete and when we realize, that more can be accomplished in one week of early treatment than in six months during the later stage of the disease, we can understand the importance of making an early diagnosis.

I believe this paper of Dr. Starry's should be preserved, and studied, because he has given you several good suggestions in regard to preparing specimens, in order to get the best results. There must be a correlation between the laboratory and every other part of medicine. The laboratory must be an important part, if the American hospital standardization requires you to have a laboratory in a hospital. I have been asked many times, "Doesn't the laboratory make mistakes once in a while?" The answer is that while mistakes are occasionally made, they are almost without exception discovered and corrected in the laboratory itself, and not by someone else. If you will follow the directions given to you in the preservation and collecting of specimens, this will be one of the most valuable papers of this session.

INFECTIONS OF THE PAROTID FOSSA*

Jack V. Treynor, M.D., Council Bluffs.

Since January 1, 1933, I have seen five instances of infection in or near the parotid fossa, three due to zygomatic mastoiditis, and two having no demonstrable connection with the middle ear or mastoid, but rather being due to suppurative parotitis. While there was a definite clinical dissimilarity in these two groups, there were also points of likeness, at least superficially, on which one could easily make a mistaken diagnosis.

A brief summary of the five cases is of interest. Two of the zygomatic perforations of mastoid origin were typical, in that the onset of preauricular swelling followed a definite period of middle ear drainage. Both carried fever and leukocytosis, both had markedly diminished hearing in the affected ear, tenderness over the mastoid proper, and the x-ray findings of acute mastoiditis. However, both showed a condition which is certainly

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not universal, namely, a red, raised, circumscribed area on the antro-inferior aspect of the canal at the junction of the cartilaginous and bony walls. In one of the two cases, mastoidectomy was deferred because of the coexisting acute nephritis with uremic symptoms. On the day previous to operation it was possible to demonstrate a flow of pus through the area above described. At operation this child showed a large subperiosteal abscess of the zygomatic root; no free pus was found in the other youngster.

The third case of zygomatic mastoiditis was unusual. A fourteen-year-old boy, always well previously, had influenza and pneumonia early in January. During the pneumonia he had no symptoms nor signs of otitis. About the middle of February, there appeared a swelling anterior to the ear which was not painful, and scarcely tender. Within forty-eight hours he had a slight purulent, spontaneous aural discharge and the preauricular swelling disappeared, to reappear four days later. This area slowly enlarged, still without pain, with little tenderness, and with no pain on motion of the lower jaw. He had had no fever at any time since the pneumonia. (His sister, a registered nurse, had taken his temperature twice daily).

When I first saw him, he had a large, firm swelling, the apex of which was directly over the zygomatic root. There was very slight tenderness, most marked a little below the root of the zygoma. There was no mastoid tenderness. The drum head seemed entirely normal, but the canal, at the junction of the cartilaginous and bony portions, presented a small furuncle-like area on the anterior wall. Hearing was entirely normal. An x-ray showed a general light opacity of the mastoid, but no necrosis. His temperature was normal, the white blood count was within normal limits, and the Wassermann reaction was negative. I might say here that after observing him for a few days, we began to feel it might be a mycotic infection, and with that in mind gave him large doses of iodides, which had no effect. I observed this lad for five days, during which time he received one hundred grains of potassium iodide daily. In spite of medication the swelling steadily increased and just before the operation there was some slight subjective pain anterior to the ear. Operation revealed a coalescing mastoiditis with necrosis of the facial ridge, zygomatic perforation, and a large subperiosteal abscess. The infecting organism which I expected to be pneumococcus III was streptococcus hemolyticus. Recovery was uneventful.

Both cases of parotitis were referred to me because of preauricular swelling, purulent aural discharge, and diminished hearing. One case followed a laparotomy for ruptured appendix, the other, a stomatitis which I suspect was an accompaniment of measles. In the first instance there had occurred a spontaneous aural discharge. In the second, the aural discharge followed paracentesis of what I believe was not the drum head. Both cases showed a mass of granulations at the junction of the cartilaginous and bony portions of the canal, arising from the anterior wall, and through which pus escaped, this escape being markedly increased by pressure below the root of the zygoma. Since in neither case could the drum head be seen, it was not easy to be sure that there was not a coexisting otitis media or zygomatic mastoiditis, especially in the youngster whose abscess presumably followed measles. It is interesting to note that in this lad the abscess drained completely by way of the external auditory canal and subsided permanently without other treatment.

All five of these cases had these points in common: preauricular swelling in close relationship to the zygomatic root, aural discharge, and localized suppuration of the canal, varying from redness and edema to actual perforation, this involvment in every case occupying an identical position.

In addition to infection of this region by way of the zygomatic root and the parotid gland, there is one other relatively common source of abscess, namely, an infected preauricular gland. Where this gland is infected as the result of an external otitis or an otitis media, a picture similar to those above described may appear. In the case of the boy whose zygomatic perforation appeared without temperature or leukocytosis, and with evidence of middle ear involvement, I first thought that he had an abscess of the preauricular gland secondary to an external otitis, possibly mycotic in nature.

Focusing our attention on the area immediately in relation to the zygomatic root, we see how and why pus from any of the three sources above named may tend to point toward the ear canal, and why a tendency toward perforation of the canal is encouraged.

When necrosis of the zygomatic root occurs, there is an early periostitis which may result in subperiosteal abscess or perforation, and extension upward into the temporal fossa, or downward toward the anterior canal wall. By dissecting downward subperiosteally the abscess may likewise reach the canal.

In parotid abscess, and in abscess of the preauricular lymph glands the route toward the external canal is the same, since the preauricular glands may be imbedded in the substance of the parotid in relation to the contained blood vessels.

This route is perfectly feasible as it represents the path of least resistance, due to the arrangement of the parotid capsule.

As the deep cervical fascia passes upward, after splitting to enclose the sternomastoid muscle, it again divides to enclose the parotid gland, and to form its capsule or sheath. This sheath is attached posteriorly to the anterior edge of the sternomastoid muscle; anteriorly, to the posterior edge of the masseter. Below, it is fused into a thickened band between the jaw and the sternomastoid muscle, from which it swings medially, attaching along the styloid process and forming the sheaths of the styloid muscles. Anterior to the styloid process the sheath is deficient to allow a prolongation of the gland toward the pharyngeal wall.

Above, the sheath is again thickened, attaching externally along the internal border of the zygoma and the outer part of the cartilaginous auditory canal; internally, to the base of the styloid process, the free border of the vaginal process and the Glaserian fissure. In other words, there is no fascial barrier at this point between the parotid gland and the external auditory meatus. Further, we note that at this point of contact between the naked gland and the canal wall there is a deficiency in the canal itself, for it is here that the cartilaginous floor and anterior wall of the canal reaches its inner limit. Although at the juncture of cartilage and bone there is a fairly dense fibrous union, just lateral there are often defects in the cartilage, the fissures or depressions of Santorini, through which pus can easily make its way.

My interest in these rather unusual conditions arises out of their clinical similarity, and particularly out of their common tendency towards spontaneous drainage by way of the external auditory canal. Procrastination in zygomatic mastoiditis may easily result in middle fossa pathology. Likewise, delay in surgical treatment of a parotid abscess may allow the infection to extend into the pterygomaxillary fossa or to the pharyngomaxillary space. Any surgery in the parotid region is fraught with danger to the seventh nerve, and may result in a troublesome salivary fistula, or may with the best of luck leave a great deal to be desired in the matter of cosmetic results.

With these dangers in mind it is necessary that we improve our knowledge of the area involved, and acquaint ourselves with the conditions found and the accurate diagnosis thereof. There should usually be little confusion as between infection of the upper parotid region and necrosis of the zygomatic root. However, such confusion may arise and all available diagnostic aid must be mobilized. The interesting question arises whether in either type of case, temporary drainage by way of the auditory canal might not be a conservative procedure where, because of doubtful diagnosis or other considerations, one hesitates to undertake more extensive surgical treatment. In cases of upper parotid abscess tending to point toward the canal, might this not be a feasible site at which to establish drainage in the hope that such drainage might be ample, and thus obviate the necessity of an unsightly and troublesome incision through the cheek and parotid capsule?

Discussion

Dr. Gordon F. Harkness, Davenport: One important point in parotid swelling is the spontaneous rupture and discharge of pus through the canal. I have seen two cases in which the pus followed lines of cleavage up to the auditory canal perforating the same but coming from a postpharyngeal abscess.

Do not forget to look at your pharyngeal wall when spontaneous draining occurs in the auditory canal, accompanied by some swelling in the region of the parotid gland.

Dr. I. N. Crow, Fairfield: This very interesting paper brings to mind a case I had not long ago. The patient, a young girl about ten years of age, had an infection in the left external auditory canal. When I saw her the infection in the external auditory canal had cleared up; but she had developed a left side pterygomaxillary abscess with considerable bulging, so that the only indication was for drainage. However, on palpating the bone over the zygoma and beneath the temporal muscle I could feel that it was roughened. There was nothing unusual in the convalescence, and after three days in the hospital, she was sent home, where she remained for ten or twelve days during which time the wound entirely healed.

In about four more days her family physician called me and said he wanted me to see this girl again. In the meantime she had developed a high temperature and considerable pain and headache, and when I saw her at the hospital that evening she had a white blood count of 35,000, with 92 per cent polymorphonuclears. She had marked brain and cord irritation. A diagnosis of cerebral spinal meningitis was made and I immediately did a lumbar puncture and drained off 30 c.c. of turbid fluid, which was under pressure. We gave her a polyvalent meningococcus serum, and to our surprise the next morning she seemed to be considerably better. We kept her in the hospital for a few days until there were no more symptoms of the cerebral spinal meningitis.

About two weeks after this she developed more marked cerebral spinal irritation. We again drained off 30 c.c. of cerebral spinal fluid, and gave her more polyvalent meningococcus serum. She recovered after a prolonged illness of three or four weeks, and up to date has had no further trouble.

This is only one of the many complications from this type of infection. There are many theories as to how that infection proceeded to the meninges, but I will not take the time to go into that just now.

There is one thing Dr. Treynor brought out that I

wish to emphasize. That is in relation to what he said about the anatomy of this region. There is a very indefinite membrane between the pharyngeal wall, about the tonsillar fossa, and the parotid gland, particularly in the upper part. No doubt some of you have seen pieces of parotid gland appearing into view in your operative work on tonsils. It is not common, of course, but nevertheless a small part of the parotid gland will occasionally show through in the upper part of the tonsillar fossa at operation.

Dr. Treynor, closing: The thing that strikes me as being interesting is the fact that in such a short space of time we have had so many similar experiences.

I did not intend to dwell at all on the ultimate complications of parotitis. I had in mind only trying to bring out one route from the parotid gland to the ear canal.

As Dr. Harkness said, there is the strong possibility of spread of infection from the parotid into a number of different areas: the ear canal, the pterygoid fossa, and the pharyngomaxillary space as described by Mosher.

I was impressed by the possibility of using this auditory canal drainage, where possible, as a temporary and sometimes as a permanent means of drainage, because, in the few cases I have seen of pus coming from the parotid region into the canal, this parotid secretion seems to have no effect on the epithelium. In other words, you do not seem to get a fistula there as easily as you do from the ordinary perforation or incision.

ACUTE BENIGN LYMPHADENOSIS OR ACUTE INFECTIOUS MONONUCLEOSIS*

S. W. BARNETT, M.D., Cedar Falls

In presenting this paper for your consideration it is not the desire to reveal a new and unknown disease, but to recall one which occurs rather uncommonly. This disease at times leads to confusion and mental worry on the part of the physician, who can be relieved by the use of a simple, but frequently discarded, laboratory procedure—namely the blood count, including the differential count.

Previous to the establishment of infectious mononucleosis as a distinct clinical entity, the condition was often confused with ordinary cervical lymphadenosis, although there were no recorded observations showing that the disease occured in definite epidemics. It was also confused with lymphatic leukemia, especially in cases where the blood was examined, because of the striking preponderance of lymphocytes. At least some of the cases reported as non-fatal acute lymphatic leukemia were what we now recognize as infectious mononucleosis. Even at the present time, many cases undoubtedly are either not diagnosed, or are incorrectly diagnosed when the disease occurs sporadically, because the clinical symptoms, in a general way, resemble many of the common mild systemic infections and can be differentiated from them only by the results of the differential leukocyte count. When it occurs in epidemics the physician is usually stimulated to make a thorough investigation of the blood smear, and the mononuclear preponderance points the way to the correct diagnosis. Infectious mononucleosis is not a common disease; it is rarely severe and never fatal, unless complicated by other conditions. Acute infectious mononucleosis when applied to glandular fever, occurs most commonly in children and young adults. Both the above names do not entirely describe the illness. In the young adult, I believe the term "acute benign lymphadenosis" is more fitting.

The occurrence of a lymphocytic reaction resembling leukemia, but followed by recovery, was first recognized in 1907 by Turk. The similarity of acute benign lymphadenosis to epidemic glandular fever of Pfeiffer has been stressed by a number of observers. The latter condition occurs chiefly in children and as we all know is characterized by fever, irregular in type, cervical adenopathy, abdominal pain, and enlargement of the spleen and liver. A polymorphonuclear leukocytosis may occur in the first few days, but both relative and absolute lymphocytosis is characteristic of the disease. Glandular fever often occurs in epidemics. Acute infectious mononucleosis or acute benign lymphadenosis, as pointed out by Tidy, Downey, McKinley and others, does not occur so frequently in epidemic form and may have more severe throat symptoms than glandular fever. Moreover, the cytology of the acute benign lymphadenosis has not been conclusively shown to be present in epidemic glandular fever of children.

The onset of acute benign lymphadenosis is similar to that of any acute infection and is characterized by fever, malaise, varying degrees of sore throat or respiratory tract involvement, headaches, swelling of the glands to varying degrees, and gastro-intestinal symptoms. The fever is irregular, usually from 101° to 104°. Pharyngitis, bronchitis and tonsillitis may be mild or severe. The spleen is palpable in 50 per cent of the cases. Hemorrhages in the skin or mucous membranes may occur. The illness lasts for about two to five weeks but usually all subjective symptoms disappear within three weeks. The adenopathy, enlarged spleen and blood changes may persist for a long period of time, even months, before returning to normal. There are no known complica-

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tions other than those which would be associated with any acute infection, and no fatalities have been reported.

Except for the blood changes, this illness might at times be diagnosed as influenza, or any acute respiratory infection. The red blood corpuscles and hemoglobin are not influenced by the disease. A leukocytosis occurs from 10,000 to 50,000, with a reduction in the number of granulocytes (or polymorphonuclears) and a marked increase in the number of non-granular cells or mononuclears which are of two types: (1) lymphocytes; and (2) the large mononuclear leukocytes, which are characteristic of acute infectious mononucleosis or acute benign lymphadenosis. They have been identified as highly differentiated mature lymphocytes by some, and by others to have a separate origin from the reticulo-endothelial system. The key to the diagnosis of infectious mononucleosis lies in the recognition of the pathologic lymphoid cells, which give to the blood in this condition its distinctive feature.

The predominating cell in infectious mononucleosis varies somewhat in size, but the majority are considerably larger than normal large lymphocytes. The cytoplasm of the cell is deeply basophilic, usually fairly liberal in amount, and often vacuolated. The nuclei are often placed eccentrically in the cell and are usually indented or lobulated. The nuclear chromatin is dense and forms quite a heavy network. Nucleoli are rare.

The various modes of onset and the persistence of the enlarged glands are the factors mostly responsible for difficulty in diagnosis. The cases which present septic types of onset must be differentiated from acute leukemia (this at times being especially difficult), acute Hodgkin's disease, miliary tuberculosis and influenza. Those cases associated with fever and membranous angina may sometimes be mistaken for diphtheria, scarlet fever, Vincent's angina, and follicular tonsillitis. Cases with only moderate fever, tender glands and moderate constitutional symptoms may be mistaken for typhoid fever and mumps. Those cases in which the adenopathy persists over a period of time must be differentiated from Hodgkin's disease, chronic lymphocytic leukemia and syphilis.

My interest was aroused in studying this rather rare illness by four cases which recently came under my observation, and caused me much concern until a series of blood counts answered the questions for me. I present two cases for your consideration, with the hope that they may be of some interest to you.

Case 1. The patient was a man, thirty-three years of age, who had recurrent attacks of pain in the right lower quadrant. An operation had been postponed for a week, because the patient had a mild sore throat. The blood count at that time was red blood count, 4,560,000; white blood count, 8,000; hemoglobin 80 per cent. The differential count was: small lymphocytes, 15; polymorphonuclears, 82; eosinophiles, 2; basophiles, 1. The temperature was 99°; pulse, 78; respiration, 16. He was re-admitted after the throat infection had subsided, and operated upon for an ordinary recurrent appendicitis. The blood count on entrance was: red blood count, 4,420,000; white blood count, 7,800; hemoglobin, 80 per cent; small lymphocytes 8; polymorphonuclears, 90; eosinophiles, 1; basophiles, 1.

Everything progressed nicely until four days after the operation when the patient had a chill and complained of a sore throat. Examination revealed the throat to be mildly inflamed. The abdominal wound was healing satisfactorily, and the heart, lungs and urine were normal. The blood count at this time was: red blood count, 4,420,000; white blood count 6,600; hemoglobin, 80 per cent; small lymphocytes, 43; polymorphonuclears, 54; eosinophiles, 1; basophiles, 2. Each afternoon for the following five days, he had a chill about 2:30, and the temperature would rise to 101° or 102°. The Widal test, the Wassermann test and the malaria and urine test were all negative. The blood counts, however, were interesting. The monocytes increased up to 70 per cent, and the total white blood count reached only 10,400. At no time were glands or spleen felt. The family demanded a consultant, who felt that this patient might possibly have a bacterial endocarditis, although three blood cultures were negative.

The patient made a complete recovery, the tem-

CHART OF BLOOD COUNTS

	Leukocytes	Monocytes	Polymorpho-nuclears	Lymphocytes
Normal	8,000	6	70	23
Observation	8,800	0	84	16
	6,400	0	83	17
operated 10 days later	7,800	0	90	10
4th day	6,600	33	54	13
7th day	8,800	38	50	11
10th day	9,400	40	55	4
14th day	10,000	64	25	9
16th day	10,400	54	40	6
18th day	10,000	70	26	4
21st day	7,800	64	34	0
23rd day	7,800	64	25	10
25th day	6,200	63	26	11
28th day	7,000	62	34	4
1 month later	6,000	8	70	20

perature gradually subsiding to normal. After his dismissal his blood counts were followed, and it was a month before they returned to normal. Slides were rechecked through the laboratories at Iowa City, and I believe this was a case of acute infectious mononucleosis. It was an atypical case, but bears out the point that it does occur, although it is difficult to diagnose at times, and often causes concern.

Case 2. This case is a more typical one and serves to point out that errors may be made unless blood counts are used to aid in making a diagnosis. The patient was a teacher in a Wisconsin town. She was twenty-two years of age. She stated that she had not been feeling well for a few days and went to a doctor for examination. At that time she had a mild sore throat, a slight cough, and felt "grippy." During the examination she mentioned a vaginal discharge, whereupon the physician examined her, said she needed a slight operation, and gave her a note to a surgeon in a nearby town. Instead she came to her own home and reported herself at the hospital. She was first observed at 10:00 in the evening with the following findings: temperature, 102°; pulse, 120; respiration, 24; blood pressure, 108/52. She was coughing slightly but seemed fairly comfortable.

An examination of the head and neck revealed a slightly inflamed throat with multiple small cervical glands. They were not tender, were separated and slightly movable. A chest examination revealed bilateral axillary glands, and there were a few moist rales in the lungs. Expansion was good and equal, and there was no impaired resonance. X-rays were negative for lung pathology. The heart was not enlarged, the rate was 120, rhythm was normal and there were no murmurs. There was no tenderness, no rigidity and no tumor masses in the abdomen; the liver and spleen were not felt. Vaginal examination revealed leukorrhea, an inflamed mucosa, a normal cervix, a uterus normal in size and position, with the adnexa seemingly normal. Bartholin's and Skene's ducts were negative. Smears taken later were negative for gonococci, but revealed a mixed infection, especially a rod-shaped bacilli. The tentative diagnosis was acute respiratory infection, but a blood count taken early the following morning directed our attention to one of two possibilities, namely: (1) acute benign lymphadenosis; (2) acute lymphatic leukemia. The red blood count was 4,120,000, and the hemoglobin was 80 per cent.

The differential diagnosis, of course, was made by the type of predominating cells, the mild illness of the patient as compared with an acute lymphatic leukemia, and the progress to recovery.

CHART OF BLOOD COUNTS

	Leukocytes	Basophiles	Eosinophiles	Myelocytes	Juveniles	Stabs	Segmented	Lymphocytes	Monocytes
Normal	8,000	1	2	0	0	4	63	23	6
May 8	12,000	0	0	2	2	6	20	4	66
11	25,000	0	0	0	2	10	13	4	71
12	28,000	0	0	0	3	5	5	9	78
13	36,000	0	1	1	3	4	12	18	61
14	27,400	0	1	1	2	5	14	16	61
16	49,000	0	0	0	1	3	5	14	77
18	40,000	1	0	1	0	4	12	10	72
19	36,000	1	0	1	0	2	8	12	76
21	16,000	0	0	0	0	3	18	7	72
23	15,000	1	1	0	2	6	15	4	71
24	10,000	1	1	0	0	7	17	18	56
25	8,000	0	1	0	2	6	25	10	56
26	7,000	1	1	2	2	6	24	12	48
June 20	6,200	0	1	0	0	6	64	24	5

CONCLUSION

In conclusion may I state that it is not my desire to uncover a new clinical disease, but to recall to mind that acute infectious mononucleosis, or acute lymphadenosis does exist as a clinical entity, not always as previously described "glandular fever;" and that it may assume atypical forms which frequently give rise to confusion, all of which can be answered by a simple laboratory procedure, namely, the blood count.

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THE TREATMENT OF PNEUMONIA IN INFANTS AND CHILDREN*

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Time will not allow me to consider in this paper, every detail in the treatment of pneumonia or to discuss much of the treatment of the complications which may arise. It will be necessary for me to confine my remarks to the discussion of the problems most commonly encountered in this disease, and in most instances I shall not even distinguish between bronchopneumonia and lobar pneumonia, the general treatment of the two being very largely the same.

Probably in the treatment of no other disease

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does nursing care play so prominent a part as in the treatment of pneumonia. Nothing should be permitted to stand in the way of the prompt and accurate execution of the physician's orders. It is not always an easy thing to resist the suggestions of anxious parents and over-solicitous friends, all wanting to do something to help the patient.

The patient should not be handled or disturbed beyond the minimum amount necessary to carry out the orders of the physician. The recovery of infants and young children has many times been seriously jeopardized by too much handling and over-treatment. Funkhouser has wisely said that in the treatment of pneumonia there is much for the doctor to do and still more for him to see that he or someone else does not do.

Vaccines and sera, with the exception of the Type I pneumococcus serum, are still in the experimental stage. Even the Type I serum is of little use in the treatment of children, because of the difficulties attendant upon the typing of the organism and because of the fact that children are usually resistant to Type I. As a rule, pneumonia in children is of Type IV. Therefore our treatment must be largely symptomatic, meeting each new condition as it arises and keeping constantly in the foreground the comfort of the patient and the conservation of his strength and resistance.

The patient's room should be well ventilated. Fresh air is one of the essentials of treatment. This does not necessarily mean cold air. Some cases of lobar pneumonia seem to be more comfortable if the room temperature is cold (50° to 55°) but children are seldom in this class and infants never. The temperature of the room should be cool (65° to 68° F.), but not so cold as to require the use of heavy covers. If there is much bronchitis and a tight cough, a somewhat higher temperature is better. The air should be kept moist by a pan of steaming water in the room, especially if there is a distressing cough.

The patient should be dressed in a simple nightgown which does not require too much manipulation to expose the body for examination or baths. Pneumonia jackets do no good where the room temperature can be well regulated. If the patient's breathing is difficult he should be relieved of the weight of the covers by a bed cradle.

Mustard plasters and other heavy, sticky pastes should be avoided unless there is evidence of pleurisy pain. They can have no effect upon the diseased lung. They impede respiration, prevent radiation of heat and add to the discomfort of the patient.

Many cases of pneumonia will recover without a great deal of attention to the reduction of fever. A temperature of 104° or 105° need not be considered alarming, if the patient is otherwise in good condition. However, it is often advisable to reduce it. For this purpose the simple tepid bath, cool sponge or the warm tub bath, followed by an alcohol rub is the most harmless and effective method. An ice cap to the head adds to the patient's comfort. If stimulation is desired along with reduction of temperature, the mustard pack may be indicated.

I do not favor the use of any coal-tar antipyretics for the reduction of fever. However, in the cases of older children, I do not think that occasional small doses of acetyl-salicylic acid for headache and for its quieting and comforting effect upon the patient are in any way injurious to the heart. On the contrary, I think it is beneficial because it promotes rest and thereby conserves the patient's energy. If given, it should be buffered in a powder with sodium bicarbonate and sugar to prevent gastric irritation.

Fluids are of more importance to the patient than food. In some cases there is an accompanying diarrhea which makes the restoration of the water balance imperative. Particularly in infants, it is often necessary to administer fluids under the skin and rectally, as well as orally. Older children will usually take an abundance of fluids by mouth, if they are offered to them frequently. If plain water is not well taken, it may be flavored with orange juice or given as soda pop or ginger ale. The orange juice may be reinforced with sugar to increase its food value.

The diet should be simple and light, consisting of liquids and soft food, with milk and the carbohydrates as the basis. It may be necessary to omit milk during the earlier stages of the disease, because of its tendency to cause flatulence and distention. Some children flatly refuse all food. In older children it may be necessary to use a good deal of persuasion to get them to eat at all, but in my experience it has been possible, by catering to their tastes and using bribes, to supply their basic requirements. Infants do not usually refuse foods, but if they do, they should be forced to take cereal gruels, diluted milk with sugar and orange juice, even if it is necessary to feed them by gavage.

Abdominal distention due to toxic paralysis of the intestinal tract is probably the most dangerous of all the complications of pneumonia. So far as I know, nothing has yet been found which will relieve it more than temporarily. Turpentine stupes with hypodermic injections of pituitrin in two to five minim doses will sometimes give short periods of relief. The pituitrin may be repeated in 45 to 60 minutes if desired, but unless the tox-

emia which causes it can be reduced, the distention will invariably return. The type of distention due to a digestive upset can be relieved by enemas and stupes. This kind of distention is not of a serious nature, if watched for and relieved promptly.

It is desirable to alkalinize the patient. This can best be done by the use of sugar in the form of stick candy or of sweetened orange juice, and moderate doses of potassium citrate in simple syrup.

Cough should not be stopped unless it is unproductive or interfering with rest. Ordinary cough syrups are worse than useless unless an opiate is added because, they do not stop the cough, and furthermore, they destroy the appetite and upset the patient's digestion. Codeine or paregoric in simple syrup is usually tolerated by the stomach, but if it is not, codeine 1/20 to 1/8 grain should be used hypodermically, especially if the child is restless. Before resorting to the opiates, however, other measures such as the proper regulation of the room temperature, and the adjustment of the moisture content of the air should be tried. A vessel of boiling water in the room is sometimes all that is needed. Steam inhalations under a croup tent, repeated every three or four hours, will usually control an obstinate cough. Creosote or a compound tincture of benzoin are often used in the water, but these are not so important as the moisture. Atropine, 1/600 to 1/300 grain, hypodermically once or twice daily, will sometimes control the cough.

The fact that a child has pneumonia is not sufficient reason for the use of cardiac stimulants. In children we are dealing with hearts which are new and strong, and which usually have not been damaged by previous disease or overstrain. The child's heart is nearly always more than equal to the extra load imposed upon it by pneumonia. The question of support for the heart must be settled by the physician's judgment, based upon experience, frequent observation of the pulse and close analysis of the heart condition. If any weakening, irregularity, or unexplained increase in the rate of the pulse is observed, digitalis is indicated in doses of one to four minims, according to the age of the patient. For quick stimulation, caffeine sodium benzoate or camphor in oil should be used hypodermically. Caffeine is given in doses of one-half grain to infants under one year of age and up to one and one-half or two grains according to the age of the child. Camphor is used in doses of one to five grains.

If the patient becomes cyanotic and respiratory collapse seems threatening, adrenalin (three to eight minim doses) or atropine (1/600 to 1/300 grain), given hypodermically, are the stimulants of choice. Either of these may be followed by camphor in oil or caffeine.

With the development of improved apparatus for its administration, oxygen has come into general use in the treatment of pneumonia. There is much difference of opinion among clinicians as to its value. It should not be expected to cure the condition, as it can have no specific effect upon the disease. Neither can it bring back to life a moribund patient. Since the purpose of all treatment of pneumonia is to give support and rest to the patient, the use of oxygen should be indicated in all cases wherein the respiratory efforts of the patient seem too rapid and difficult and in which cyanosis occurs. If the pneumonic process involves extensive areas of the lungs; if the respiration is rapid and shallow; if the respiratory efforts are exhausting the patient and cyanosis is in evidence, oxygen with five per cent of carbon dioxide should be used immediately. The carbon dioxide increases the tonus of the respiratory muscles. The combined gases slow the respiration and increase its depth, thereby opening many collapsed air vesicles, increasing the vital capacity, promoting drainage of the lungs and increasing the oxygenation of the blood. This is not curative, but it is supportive treatment. If the patient is too far gone before it is started, it can do no more than to prolong life for a short time.

Diathermy is another form of treatment which has been the subject of controversy among physicians. It is probable that imperfect and variable technic in the application of diathermy is responsible for some of the variable results obtained from its use. Perhaps it has not been used frequently enough or intensively enough. I cannot offer a long series of cases in support of my stand, but I have used it enough to convince myself that diathermy is a worth-while adjunct in our general supportive treatment of the patient. Just as in the oxygen treatment, we cannot expect it to be a specific or a cure. In our treatment of pneumonia we must always remember that we are treating a patient and not a disease. Diathermy certainly has some effect upon the disease but just what that effect is I would not attempt to say. In the patient, it is shown in greater comfort, slowing of the pulse and respiration, rather profuse diaphoresis, and often a gradually declining temperature. I am sure that it has quickly relieved pleurisy in some cases I have seen. I have seen at least two cases in which apparently well developed pneumonia seemed to have been aborted within four or five days from the time diathermy treatments were begun. These cases were seen early and diathermy was started immediately. The improvement from the time of start-

ing this treatment was so striking that I could not help believing that it hastened recovery.

It is hard to estimate the value of any kind of treatment in a disease so variable in its virulence and invasiveness, and occuring in persons of all ages and under such a diversity of conditions as does pneumonia, but I am sure that there are a few simple rules to which we can safely adhere in all cases.

1. Good nursing, attention to the diet, fresh air and keeping up the body fluids are essential in the treatment of pneumonia.

2. Hypodermic medication is preferable to medication by mouth, and this should be limited to the minimum amount necessary to relief of symptoms.

3. There should be the least possible amount of handling and disturbance of the patient consistent with good nursing care.

4. All treatment should be aimed to promote rest and conserve the strength of the patient.

THE USE AND ABUSE OF CESAREAN SECTION*

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If we were to characterize the last decade by any special title, obstetrically speaking, it should be called the "Period of Interference." A tidal wave has swept over the entire medical world, which seemingly reached its highest point in the United States, and left in its wake, too many dead babies, and too many dead and injured mothers. The toll has become too great, and the United States instead of lowering its obstetric mortality and morbidity rates, finds itself in a peculiar position. Our mortality is not only not decreasing, but is actually becoming greater, in some localities. The statistics obtained for these facts are based on work done in foreign countries, where midwives do such an immense number of the obstetric deliveries, as compared to this country where obstetricians and general practitioners do the major part of the work. A great many surveys have been made on the above subject, and the figures have been produced to prove the contentions of all interesting points, but the facts, deduced from the figures obtained, show that operative interference is occupying a large place in our obstetric work, and that the results are not so flattering as they should be. Doctors who practice obstetrics, have not learned to wait for the various procedures, which nature has established for the successful completion of childbirth. Forceps formerly were used very infrequently, and the mother was given a chance to deliver herself; but now the impatience of the obstetrician coupled with that of the anxious family, seems to close the deal, and too many forceps cases are the result. Plass tells of an old practitioner, of fifty years experience, who, in over 3,000 cases, used forceps only three or four times during that period. The teaching of men who stand high in the obstetric profession, such as Potter of Buffalo, who does versions during the second stage of labor on all cases that do not require a cesarean section, and DeLee of Chicago, who advocates low forceps at the perineal stage of delivery, with episiotomy, has given physicians, especially the young practitioners, the idea that all interference is safe.

Calvert[1] of Wisconsin, reported on a series of 632 puerperal deaths. Sixty per cent of all deaths occurred after operative procedures, 36 per cent were forceps deliveries, 27 per cent followed cesarean sections, and 34 per cent followed miscellaneous operative procedures. The problem in Wisconsin was not a midwife problem, since 94.8 per cent of all births were attended by physicians. The death rate in the country was less than that in the city. In Iowa in 1930, there were 26 cesarean section deaths in 258 maternal deaths from childbirth. In 1931, 20 out of 178 maternal deaths were attributed to cesarean section, and in 1932, 13 out of 173 maternal deaths were from this cause.

Since aseptic surgery became an assured fact, and the opening of the abdomen was not a hard, nor mysterious undertaking, the incidence of cesarean section has had a marked increase, both here and abroad. The average mortality rate of all cesarean section operations, averages between 6.5 and 7 per cent, which is entirely too high.

The causes of frequent cesarean section have been many and varied. First, the man who can perform a successful appendectomy, and other easy abdominal surgery, and who also carries on an obstetric practice, seems to be inclined to do those things which are easiest for him, and which take the least time. He is not obstetrically-minded. Perhaps, he has never measured a dozen pelves in his whole professional career. He does not insist on his patients reporting to him, at stated frequent intervals, particularly during the last few weeks of pregnancy, for a series of check ups whereby he may discover any disproportion between the head and pelvis, an approaching eclampsia, placenta praevia, and the many other complications which may occur during this period. This type of practitioner performs a cesarean section at the least provocation.

Miller[2] of Connecticut, recently stated that his community had developed a cesarean section complex, and that the increasing number of sections

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in his vicinity was ascribed to a change in attitude, on the part of both the physicians and patients, and that normal deliveries are becoming more rare each year. He quoted that in the emergency cases so sectioned, one can see the fearful price paid for errors of obstetric judgment, in dealing with contracted pelves. In a survey of the Los Angeles, California, district, Thompson[3] found that of 201 physicians who had performed cesarean sections, 75 had performed one operation; 59 had performed two to five; eight had performed four or more; five had performed 50; and two had performed 75.

There has entered into the minds of the profession, the sentiment that the baby must be saved at all hazards, and abdominal section is performed in these cases, without due regard to the risk that the mother is assuming. The lowest mortality rate has been shown in those hospitals, where obstetricians have studied the cases before labor, and have applied that particular method of delivery which fits the individual case.

INDICATIONS FOR ABDOMINAL SECTION

1. The first on the list is cephalic-pelvic disproportion. Here we can lay down no hard and fast rules about pelvic measurements. We recognize the flat pelvis, the justo-minor pelvis, and the oblique type of pelvis, but who can accurately estimate the size of the head, and whether, by the test of labor, sufficient moulding might take place, so that a normal birth will be the result? If a woman has a male type of pelvis, with a contracted outlet, and has had one or two forceps deliveries, with dead babies, we may conclude that her pelvis is too small. If all our pelvic measurements are decidedly below average, and the test of a labor of several hours shows no advancement of the head into the pelvis, then abdominal section must be seriously considered. Greenhill[4] describes a type, which he labels, as having the dystocia dystrophia syndrome. He describes her as an elderly, heavy set, primipara, or one who has had one or more sad obstetric experiences, with masculine features, and a large external pelvic measurement, but small cavity, a narrow vagina, with a rigid cervix, which is short and firm, and with a family history of dystocia and toxemia. She goes beyond her term, has a narrow pelvic outlet and the baby, which has a hard head, is lying in the right occipitoposterior position. She has an early breaking of the bag of waters, with weak and irregular pains. Greenhill believes there is much danger in trying to deliver a baby from below, when these conditions are present.

2. The second class is composed of those who have had a cesarean section, and over this class there is very little dispute, although cases have been delivered in our part of the country, with forceps, even after there had been a previous section.

3. Tumors of the uterus obstructing the pelvis, such as fibroids, low down in the lower uterine segment, cysts of the ovary, or cancer of the cervix, are definite indications for a cesarean section.

4. We feel that in the presence of cardiac disease, it is unwise to risk further straining of the heart muscles, by the strain of labor. We have a perplexing problem, especially in a primipara, with a decompensated heart, since we fear to let her have the test of labor, as we might further dilate the heart. This case should be sterilized during the operation, providing the patient's permission has been obtained. A local anesthetic is indicated here, if the condition will warrant it.

5. We think a cesarean section is justifiable in a primipara, with very little dilatation, and a complete, or almost complete, placenta praevia.

6. In the case of ablatio placentae there is a hemorrhage from the vagina, with a rapid increase in the size of the uterine ovoid. This has happened five times, in my experience, with two normal deliveries, and three sections. Two of the sections followed trauma, and one, the toxemia of pregnancy.

7. It is a moot question as to whether or not the toxemias of pregnancy constitute an indication for cesarean section. In eclampsia, or pre-eclamptic states, we are divided into the conservative and radical groups. Under the expectant and medical treatment, the mortality rate has decreased 50 per cent in the past five years. However in clinics, for example, the DeLee Clinic, section is performed after the first convulsion, if the patient is not near delivery, or if the delivery cannot be accomplished easily from below. Taking it by and large, cesarean section is not to be recommended, as a routine for eclampsia; but each case must be studied individually.

8. Tetany of the uterus with a pronounced contraction ring, is a definite indication. In one of my cases, a persistent face case was accompanied, by a retraction ring, which was not remedial, except by section. This condition is not encountered frequently, but is troublesome when it does occur. In this instance we may find the child absolutely immobile by forceps, version, or any other obstetric procedure, and section may be necessary.

Other indications have been cervical and vaginal atresia, malpositions, double uterus, and prolapsed cord.

TECHNIC

The method of performing abdominal sections should be chosen for each individual case, accord-

ing to the skill of the operator and his assistants. The classical operation consisted of, either delivering the uterus from the abdominal wound, and making an incision in the fundus between the tubes or leaving it in situ, making the same incision, and draining off the amniotic fluid, with a suction apparatus, in order to avoid peritoneal soiling, as much as possible. The delivery having taken place, the placenta and membranes were stripped from the uterus, and the uterus sutured in two or three layers, according to the technic of the operator. I have used the two-layer method, puting interrupted sutures in the first layer, down to the mucous membrane of the uterus, while the second layer was a modified Czerny-Lembert suture, with the peritoneal surface folded over the incision. I used this method on one patient, three different times, and the scar was smooth, and strong, with a notable absence of adhesions. This operation has the advantage of being rapid, and where time is an element, in a clean case, it is ideal. However, it is limited to a few, clean elective cases.

The low cervical section as described and modified by Dr. DeLee has a great many advantages over the classical operation. It is a safer operation in cases that have been in labor a long while, where the waters have drained away, and where we have a possible infection. No case can go twelve hours, with the amniotic sack ruptured, without being classed as potentially infected. The peritoneum, above the attachment of the bladder to the uterus, is incised transversely, with convexity of the curve upward, the peritoneum is stripped down, and held out of the way, with a special retractor. A longitudinal, or transverse incision, (preferred by some) is made in the lower uterine segment. Short forceps are applied to the head, the baby is delivered, the placenta expelled, and suturing of the uterine incision is done, in two layers, care being taken to go only to the mucous membrane of the uterus. The upper layer of the peritoneum is sewed to the lower layer, below the free edge, and the free edge is sewed, above, and covering the upper peritoneal edge. This makes a double layer of peritoneum, covering the wound, and precludes any infective fluid squeezing out of the uterus into the peritoneal cavity. Greenhill reports 117 consecutive cesarean sections of this type, at the Chicago Lying-In Hospital, without a death. This operation takes more time and is more difficult to perform, but the results, as compared with those of the classical section, speak for themselves. The badly managed obstetric case, which has been manipulated a great deal, and had many examinations, and then comes to section, would fare better, if a Porro operation followed the cesarean section, thereby removing an infected uterus, which will tend to become more infected, causing death, if it is allowed to remain.

The subject of anesthesia enters into the successful abdominal cesarean section. Many are performed, under local or spinal anesthesia. At some outstanding clinics, however, it was found that spinal anesthesia produced postoperative pneumonia more frequently than did ether. If available, ethylene, is valuable, especially if combined with local anesthesia. Patients, who have hemorrhaged a great deal should have transfusion before operation.

SUMMARY

1. Too many operations are performed in the practice of obstetrics. This is especially true of abdominal sections. The high incidence is due to the cesarean section complex, which is now prevailing, and to the fact that the baby's life has been thought equally important, or more important than the mother's.

2. The trained obstetrician should be the one to decide when, and which type should be performed.

3. A very definite indication should exist, since the mortality rate from cesarean sections equals about seven per cent of all cases operated upon.

4. Fewer classical operations and more low cervical operations should be performed.

5. The choice of a suitable and safe anesthetic should be given especial attention.

6. Transfusions should be done, in all depleted hemorrhagic cases.

7. Keep in mind the words of Thompson: "So long as there are more physicians practicing obstetrics, who are capable of dragging a baby through a sufficiently large abdominal incision, than are capable of doing satisfactorily, a difficult internal version, or mid-forceps delivery; so long as they are more unwilling to grant nature an opportunity, than there are those, who can estimate, correctly, what a test of labor is accomplishing, there will be reviews, which will contain beautiful examples of bad obstetrics."

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Discussion

Dr. R. M. Sorensen, Cumberland: The keynote of Dr. Vinson's paper is contained in the warning that too many cesarean sections are being performed without the proper thought having been given to the

reasonableness of such a procedure. He points out, that as a result, we are losing too many mothers and too many babies.

This tendency for operative obstetrics may be due to the presence of a cesarean section complex, and the increased importance given to the life of the infant, but it may also be a natural outgrowth of the age in which we live. Speed is the password of modern civilization. We have no time to sit down quietly and thoroughly follow a problem through to its logical conclusion. Instead, we crave action. Hence many of our worthwhile discoveries in the field of scientific medicine come from the other side of the Atlantic. We are willing to try the theories and treatments of others, who have spent many weary hours, or even the greater part of a lifetime evolving them, but we are not willing to spend the time necessary to develop these theories for ourselves.

Nature has provided a precise and orderly arrangement of things, but it is ever a leisurely process. We have all told our patients that when a person interferes with the natural processes, he is inevitably inviting trouble. This fact is true when applied to the practice of obstetrics. Nearly every case has certain definite stages through which it must pass to completion, and while those stages are the same in each case, the time required for each period, and for the whole process, varies greatly.

Someone has said of surgery that it is an attempt to restore the original anatomic picture, and the more nearly that picture can be restored, the more successful the operative work will be. Likewise in obstetrics, the more nearly we can follow the course of nature, the more successful we shall be in that field. Therefore, it follows that unnecessary speed, unwarranted interference, and hasty decisions to operate, all tend to lead us away from the so-called "normal delivery," and into dangerous paths. Naturally we wish to make the deliveries as easy as possible for our patients and we should, but forcing natural processes is almost unpardonable.

Dr. Vinson has ably pointed out the indications for cesarean section, and has told us of excellent methods of performing them. When these indications are closely followed and cesarean section is necessary, there should be no hesitancy. However, we should never let the desire to make a fourth at bridge, to complete a foursome in golf, or to fulfill a dinner engagement, take the place of definite indications for a cesarean section.

Dr. Erwin von Graff, Iowa City: I just want to add to the excellent paper presented by Dr. Vinson, that I certainly agree with his statement that far too many cesarean sections are performed. However, this alone does not account for the high mortality which has been so terrifying that two years ago a committee was appointed in New York to investigate the causes. It is not so much that too many cesarean sections are being performed as it is that too many men are doing cesarean sections who are not qualified to do them. I had the opportunity of hearing the first report of the above mentioned committee, which brought out the fact that two cesarean sections had been performed by a dentist and an oculist. It is no wonder that such men have bad results.

The speaker has emphasized the importance of the labor test in order to reduce the frequency of cesarean section. We have to wait because there are cases in which even the experienced obstetrician is unable to predict whether or not a woman will be able to have spontaneous delivery or will require operative assistance.

With regard to the test of labor, the substitution of the low-flap cesarean operation for the classical one, means a remarkable progress, because the low-flap cesarean section not only permits a longer period of waiting but it may also be performed even in infected cases. When we first started to use the low-flap cesarean section in the old country, our limit was a temperature of 103°. If a patient had less than 103°, we felt we were entitled to perform a low-flap abdominal operation. It was only when the temperature was above 103°, i. e., in the case of a very virulent infection, that we felt it was wise to remove the uterus after delivery or to sacrifice the child.

It is interesting to note that among all these cases with temperatures of 102° or 103°, not a single case of low-flap cesarean section was lost. From this point of view, the emphasizing of the low-flap cesarean section instead of the classical operation is very desirable. It not only saves more children, but reduces for the mothers the immediate dangers of infection and the danger of uterine rupture in later deliveries. In addition, with regard to the unjustified indication and performance of cesarean sections by men without proper training, the fact that the low-flap cesarean section is somewhat more difficult would cut down the frequency, and thus help in protecting our patients from unskilled operators.

THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCE

A FULL TERM TUBO-ABDOMINAL PREGNANCY OF THIRTY-NINE MONTHS DURATION

C. E. LOIZEAUX, M.D., Dubuque

The case to be presented is of interest because of the duration of the pregnancy and because it is an example of a well recognized but very rare outcome of tubal gestation.

CASE REPORT

The patient, a white woman thirty-eight years of age, was admitted to the Finley Hospital on May 8, 1932, with a complaint of "pain in the abdomen and back, chills and fever."

Family History: Her husband and a child of eight

are well. Otherwise the family history is unimportant.

Past History: In February, 1929, over three years before the present examination, the patient became pregnant. At about the third month of gestation she



Fig. 1.

had an attack of sharp pain in the abdomen and back, but nothing unusual was detected to explain the pain. After eleven months she became alarmed at the duration of the pregnancy and in January, 1930, an x-ray examination revealed a full term pregnancy, supposedly a uterine pregnancy (Fig. 1). The cranial bones overlapped and in some areas were depressed, suggesting a dead infant. The patient was told that no treatment was necessary, since the fetus would pass spontaneously. Nine months later, in October, 1930, another x-ray examination showed a macerated fetus. The patient was told that it was "absorbing" and should be left alone. She was tired and worn all this time, and unable to do much work. No blood examinations were made, although she felt feverish and had many chills. After a consultation it was again decided not to interfere as the gestation was supposed to be intra-uterine.

Present Illness: I first saw the patient on May 6, 1932, when she had a chill which was followed by fever as well as pain in the lower abdomen. She was advised to enter the hospital for an operation to remove the macerated fetus which was still thought to be within the uterus. On admission she had a temperature of 102° and her white blood count was 12,000. The general examination was negative. A vaginal examination showed a large, boggy mass filling the left side of the pelvis.

Preoperative Diagnosis: Degenerated fetus.

Operative Notes: A round mass 15 cm. in diameter filled the left side of the pelvis. It was surrounded by omentum and intestine which were bound to the sac by fibrous adhesions. These were cut and the sac which was continuous with the left tube was removed. It was somewhat torn and contained the bones and degenerated soft parts of a fetus. The uterus and opposite tube and ovary were normal in appearance.



Fig. 2.

Postoperative Diagnosis: Degenerated full term tubal pregnancy.

Postoperative Course: The patient made an uneventful recovery and left the hospital in seventeen days. She has been well ever since and at the present time (October 10, 1933) is four months pregnant.

Description of the Surgical Specimen: The specimen is an ovoid mass 17 cm. in its longer diameter and 13 cm. in its shorter diameter. There are a few

fibrous tags and some adipose tissue over the outer surface. In one area there are a few, small slit-like perforations, possibly due to tearing in removal. A small amount of greasy, cloudy fluid exudes from the perforations. At one end is a portion of the Fallo-

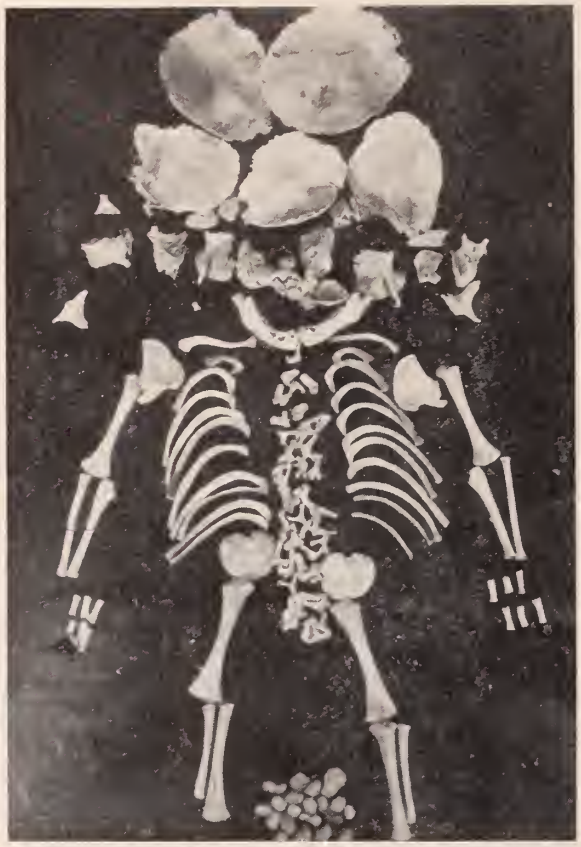


Fig. 3.

pian tube, approximately 4 cm. in length. On opening, the lumen of the tube is found to be continuous with the main portion of the cavity. The latter is filled with greasy material, hair and the bones of a fetus (Fig. 2). On removal, all the bones of what is judged to be a full term fetus are identified (Fig. 3). In the uterine portion of the tube, the mucosa is in regular, close folds but as the main cavity is approached the folds become progressively flattened and more widely separated. Finally they merge imperceptibly with the wall of the sac which is fibrous and measures 3 to 4 mms. in thickness. The sac is lined by an irregularly congested, granular surface. The fimbriae cannot be found. The ovary shows a few small follicular cysts and the usual scarring seen at the age of the patient. Microscopically, the sections of the Fallopian tube show moderate fibrosis and well marked round cell infiltration. Sections from the main sac show the wall to be composed of connective tissue which is infiltrated with round cells and a few polymorphonuclear leukocytes as well as degenerated red blood cells. No lining epithelium can be detected in the several sections made. Smooth muscle cells are not seen in the sections from the main portion of the sac.

Anatomic Diagnosis: Full term tubo-abdominal pregnancy with skeletonization of the fetus.

Summary of the Case: At the end of the third month, a pregnant woman had an attack of sharp pain in the abdomen for which no explanation was found. Eleven months later an x-ray examination showed a dead fetus and nine months after that, an x-ray examination showed a degenerated fetus. Thirty-nine months after the onset of pregnancy, evidences of infection developed. At operation a gestation sac continuous with the Fallopian tube and containing the bones of a full term fetus was removed and the patient made an uneventful recovery. Until the operation no one suspected that they were dealing with an extra-uterine pregnancy.

COMMENT

With hindsight as a guide, we must admit that in this case the correct diagnosis should have been made or at least it should have been discovered that the fetus was not in the uterus. The lack of a vaginal discharge during the two years after term and while the fetus was degenerating should have aroused more suspicion than it did. While the outcome was satisfactory in this instance, in spite of the failure to make a diagnosis, the consequences might have been more serious, as will be indicated in a brief discussion of ectopic pregnancy.

GENERAL DISCUSSION

Incidence: The reported statistics indicate that the ratio of extra-uterine to uterine pregnancies is approximately 1 to 100. Thus, Wynne[1] in Baltimore reports an incidence of 1.3 per cent; Schumann[2] in Philadelphia, 0.3 per cent; Farrar[3] in New York, 1.5 per cent and Sivertsen[4] in studies in St. Paul and Minneapolis, 0.7 per cent. All authorities agree that the vast majority of extra-uterine pregnancies occur in the Fallopian tube and that the ovarian and abdominal types are extremely rare. Indeed the weight of evidence indicates that the latter is always secondary to either a primary tubal or ovarian pregnancy.

Etiology: Any condition that interferes with the downward passage of the fertilized ovum may result in extra-uterine pregnancy. Persistent fetal convolutions, hypoplasia, diverticula, accessory lumina or tumors of the Fallopian tube are all possible etiologic factors. Pelvic inflammatory disease with the formation of adhesions is recognized as a most important cause. This may result from infection of the tube itself or of some neighboring viscus, especially the appendix. Probably many cases follow trauma or infection after childbirth, since several studies have shown

that 80 to 90 per cent of ectopic pregnancies occur in multiparae. Each tube is affected with about the same frequency; very rarely both tubes may be involved simultaneously. A few cases of combined tubal and uterine pregnancies have also been described.

Pathology: Three types of tubal pregnancy are recognized: interstitial, isthmian and ampullar. Rarely the ovum may be implanted upon the fimbriated extremity or even upon the fimbria ovarica. Secondary forms such as tubo-abdominal, tubo-ovarian and broad ligament pregnancies may develop from these primary types. While there are some differences in the course of each type the pathology is essentially the same in each. The fertilized ovum becomes implanted on the mucosa of the tube and burrows through the epithelium to the subjacent tissues where it is surrounded by the trophoblast, which quickly invades the surrounding tissues causing them to degenerate. At the same time blood vessels are opened and the maternal blood is poured into spaces within the trophoblast or between it and the surrounding tissues. The tube wall is weakened by the erosive effect of the trophoblast. At times a blood vessel may be eroded and the result is an early hemorrhage into the tube. The usual termination is rupture, either into the tube or into the peritoneal cavity. More rarely rupture may occur into the broad ligament. In this instance, the fetus may develop, but more often it dies as a result of hemorrhage. In other instances the fetus may be forced through the fimbriated end of the tube into the abdominal cavity. In any event profuse hemorrhage into the peritoneal cavity is likely to occur. The fate of the fetus depends largely upon the degree of damage done to the placenta. If the placenta is greatly damaged, death of the fetus and subsequent absorption follows. If the placenta remains unattached or obtains a new attachment quickly, the fetus may go on to term, usually within the abdominal cavity but at times in the ovary or broad ligament. Very rarely indeed may the fetus reach full development within the tube. However, death and absorption of the fetus are the usual results. In those cases in which the fetus continues to develop, the gestation sac is surrounded by omentum, intestines and newly formed adhesions, while the placenta may gain new attachments to the abdominal viscera (uterus, intestines, diaphragm and liver). At term the placenta is senile and quickly ceases to function, resulting in the death of the fetus. It is therefore necessary to remove the fetus before term in order to obtain a living child. Due to its widespread attachment and vascularity, the removal of the placenta is a hazardous procedure because of the danger of hemorrhage. At operation many surgeons leave it in situ and allow it to detach itself and be discharged through the wound (marsupialization) or be absorbed. The fetus which develops outside the uterus is more likely to be deformed, but normal children may be born in this manner if laparotomy is done shortly before term. The uterus enlarges moderately early in an ectopic pregnancy and not infrequently a decidual cast of the uterine cavity is passed after the death of the fetus; a point of diagnostic significance.

Fate of the Extra-Uterine Fetus: As indicated above, the universal fate of small embryos extruded into the peritoneal cavity and without a functioning placenta is death and absorption. If the fetus has reached a considerable size before death it cannot be absorbed and it undergoes one of four changes, i. e., suppuration, mumification, calcification or adipocere formation. Suppuration due to invasion of the sac by pyogenic organisms is the most serious. The suppurating mass may rupture into the peritoneal cavity, into the uterus, urinary bladder or intestines, or it may perforate the abdominal wall. Calcification apparently is more favorable and results in a hard mass within the abdomen. Cases have been reported in which a lithopedion has been carried for 60 years. Such an outcome is extremely rare at the present time, however, due to the improvement in diagnosis and surgical treatment.

Diagnosis: The diagnosis of extra-uterine pregnancy rests largely upon the history and the physical examination, and of course each will vary depending upon whether or not rupture has occurred. In general, there is a history of a missed, a postponed or a prolonged menstruation. Very frequently there is a history of pain, varying between a vague uneasiness in the pelvis and back to a severe unilateral pain which often is described as a stinging pain. The pain, which at first may be intermittent, tends to become more constant and severe. It finally localizes on the side affected. In some cases there is irregular vaginal bleeding. It may be a slight tarry discharge or a frank hemorhage. When perforation occurs the pain is more severe, cramplike and usually definitely localized on the side affected. The characteristic clinical picture is that of severe shock with prostration and a very marked pallor. The temperature and the leukocyte count may be slightly elevated depending largely upon the amount and duration of the hemorrhage. The condition, which is relatively easy to diagnose in typical cases, pre-

sents difficulties in border-line cases. It must be differentiated from appendicitis, ovarian cyst, salpingitis and incomplete abortion. In those cases in which the fetus continues to develop after extrusion from the tube, the diagnosis should be suspected when the uterus fails to enlarge as expected, when a decidual cast is extruded from the uterine cavity, and when there is a history of a sudden attack of pain in the pelvis early in pregnancy. With this knowledge, and the information gained from x-ray pictures, the diagnosis should be made.

Treatment: Surgery is the accepted treatment of a ruptured tubal pregnancy. Whether operation should be delayed or performed immediately after the diagnosis is made has been the subject of considerable discussion. The weight of opinion favors immediate operation largely because it is impossible to determine in a given case whether or not the hemorrhage will continue. If it does, nothing is gained by delay. In the event that an abdominal pregnancy is diagnosed two types of treatment are advocated. One is an immediate operation, with the fetus being delivered through the laparotomy wound and the placenta being allowed to remain in situ, walled off as much as possible until it sloughs away (marsupialization). Another type of treatment is to delay surgery until the death of the fetus when the placenta loses its vascularity so that its removal will not be attended by severe hemorrhage. Since it is more desirable to deliver a living child than a dead fetus, the former seems to be the better treatment.

CONCLUSION

A case of full term, tubo-abdominal pregnancy which was carried for thirty-nine months and which resulted in skeletonization of the fetus has been described. The exact diagnosis was made only at the time of operation. While the outcome was satisfactory to the patient in this instance, the result might have been far more serious. Furthermore, we should not lose sight of the fact that a living baby might have been obtained if a correct diagnosis had been made before term.

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THE CLINICAL CONGRESS OF THE AMERICAN COLLEGE OF SURGEONS

Chicago, the home of the spectacular 1933 Century of Progress Exposition, has entertained many national and international societies. None, perhaps, have had a more far reaching effect upon the practice of medicine than that held by the American College of Surgeons during the second week of October, when this national group met in a most profitable five-day session.

William David Haggard of Vanderbilt University, occupying the chair of president, provided the host of members with a series of lectures, conferences, clinics, and symposia covering the field of diagnostic and operative surgery. High spots in the program were: a symposium on appendicitis, the oration by the president upon the art of surgery, a lecture by George W. Crile on the electrodynamics of the body and goiter, and a symposium on cancer presided over by Dr. Robert Battey Greenough of Boston, President Elect of the Congress.

Dr. Alton Ochsner of New Orleans, discussing the mortality from appendicitis, indicated that the mortality rate today is 50 per cent higher than it was fifteen years ago. He further indicated that 70 per cent of all cases of appendicitis occur between the ages of ten and thirty. Dr. Franklin H. Martin, an organizer of the Congress, reported a total of 24,448 five-year cures from cancer. Of his series 7,990 patients had suffered from cancer of the uterus, 8,051 from cancer of the breast, 1,506 from cancer of the mouth and lips, 1,124 from cancer of the skin, and 2,067 from cancer of the colon and rectum. The keynote of his discussion is summed up as "Cancer is curable."

In discussing a factory medical code it was indicated that over 3,000,000 industrial employees annually lose time from injuries, with some 25,000 deaths resulting. It was further stated that 87,000,000 suffer minor injuries from industrial accidents yearly. It was the opinion of the Congress that factories must become better equipped for the handling of industrial cases and that they must utilize hospitals which are equipped with proper facilities and standards in the treatment of industrial cases.

In spite of the crowded conditions in the hotel and the distraction occurring from interests associated with the Exposition, this meeting is said to have been one of the most useful in the history of the organization.

State Department of Health

Walter L. Bierring

CHRISTMAS SEAL SALE

In a short time physicians and others will be asked to buy Christmas seals. Each year, all of us receive a letter containing the Christmas seals. Physicians who give much of their time and effort to provide effective treatment for patients suffering from tuberculosis, have already been called upon to do their part in the struggle against tuberculosis. They realize, however, that in addition they can make a distinct contribution by supporting the antituberculosis campaign in their respective communities.

It is a well known fact that the death rate from tuberculosis has decreased rapidly during the present century. Various factors have been influential in lessening the number of deaths from this condition. It is believed that prominent among these factors has been educational work carried out by national, state and local tuberculosis associations during the past years.

Methods leading to the early recognition of tuberculosis are now being applied to individuals and groups. The tuberculin (Mantoux) test, is of greater significance than formerly, due in part to the lessened incidence of tuberculous infection. By means of the x-ray, cases of primary tuberculosis are discovered among children and others, who react to tuberculin or show involvement on physical examination. Such cases are given special care, kept under observation and re-rayed after an interval of about three years.

In continuing the fight against this foe of youth, local communities, health agencies and physicians are more dependent at this time than ever before, upon the voluntary contributions of those who buy Christmas seals. Let us endeavor, as physicians, to support this worthy effort as never before so that the program of early discovery of tuberculosis made possible by the sale of Christmas seals, may be carried out with groups, large or small, in every locality in this state.

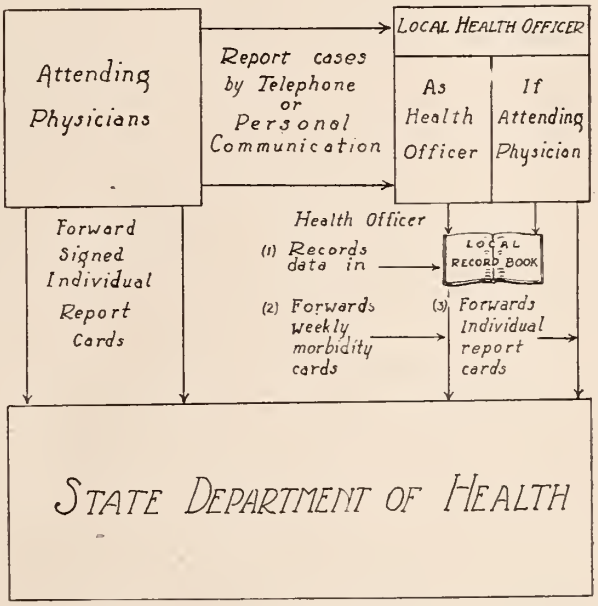
IMPORTANCE OF PROMPT REPORTING

Every effort is being put forth to obtain more complete reporting of the various infectious diseases.

Section VII in Rules and Regulations has been revised and provides that attending physicians report cases directly to the office of the collaborating epidemiologist (Dr. Walter L. Bierring). The report cards carry the franking privilege and require no postage. Before mailing the cards, cases should be reported to the office of the local health officer, by telephone or personal communication, so that the name of the patient, the name of the disease, the day of onset, and other information contained on the cards may be entered in a permanent record book, kept by the local health officer. Such a communicable disease record book is obtainable through the office of the county auditor, or an ordinary ledger may be adapted for the purpose. Each record book contains a history of cases (now and then of deaths) from communicable disease for the community concerned and becomes of increasing value as time goes on.

In addition to the individual report cards forwarded by attending physicians and health officers, the latter

Diagram to Show Method of Reporting



will also mail each week to the office of the collaborating epidemiologist a weekly morbidity report form, listing the number of cases of the various diseases reported for the week. An adequate supply of these cards is being printed in Washington, D. C., and will be distributed to health officers as soon as available.

Prompt reporting of communicable diseases represents the first step in their control. The method of reporting has been simplified as much as possible in

order to minimize the amount of clerical work necessary. Many physicians and health officers are faithful in reporting their cases. The continued cooperation of all physicians and health officers is desired so that Iowa, now in the below average list, may be classed with those states whose records represent a fairly accurate index of disease prevalence.

TOXOID AND TOXIN-ANTITOXIN

Behring, who discovered diphtheria antitoxin in 1893, was the first to use toxin-antitoxin experimentally twenty years later, in order to establish active immunity in man. Toxin-antitoxin is a mixture containing diphtheria toxin nearly neutralized with antitoxin. Horse serum antitoxin was used in this preparation for a number of years, but has since been supplanted by antitoxin from goats to minimize the possibility of sensitization to subsequent therapeutic doses of antiserum made from the horse.

Toxoid, a product made by treating potent diphtheria toxin with formalin and storing at 37° Centigrade until it becomes non-toxic was introduced by Ramon in 1923. Different investigators in connection with the work of diphtheria immunization, have since had the opportunity to compare the relative merits of toxin-antitoxin and toxoid. Toxoid has been shown to be superior to toxin-antitoxin in a number of respects and is now widely used, not only by physicians in private practice but for group immunization as well. Advantages of toxoid over the older preperation are summarized as follows:

1. It contains no serum. The only protein constituents are those derived from peptone and meat used in the broth, and from metabolic products of the diphtheria bacillus.

2. It is non-toxic and contains no free toxin.

3. It is more stable, is not affected by freezing and is good for a period of at least eighteen months if kept in the refrigerator. There is a tendency for toxin-antitoxin mixtures to deteriorate and to undergo changes at room or freezing temperatures.

4. Two treatments, given at intervals of a month are more effective than three doses of toxin-antitoxin given at weekly intervals, in that a larger percentage of children acquire immunity, and in a shorter period of time.

5. No reactions result in young children. The local reactions occasionally seen in older children are never dangerous.

6. It is more economical where large numbers are concerned. A 30 c. c. vial, although it may cost as much as 33⅓ per cent more, will treat half again as many children.

During the past decade in Iowa, diphtheria immunization of individuals and groups, has been carried out in most of the counties of the state. Toxoid, in addition to its other advantages, immunizes as high as 95 per cent of all children, (at least 20 per cent more than can be expected following toxin-antitoxin) and for this reason it is urged that the newer product be used wherever possible.

A Schick test is advisable six months after immunizing treatments, to determine immunity. This is even more essential following the use of toxin-antitoxin, since experience has shown that about 30 per cent of the children fail to acquire complete immunity as a result of the course of three treatments.

THE PUBLIC MILK SUPPLY AND THE PUBLIC HEALTH

The above title appears on the front cover of the Iowa Public Health Bulletin for July, August and September, 1933. The title is that of an article prepared by M. E. Barnes, M.D., Dr.P.H., Professor of Hygiene, Preventive Medicine and Bacteriology at the University of Iowa and Director of the State Hygienic Laboratories. The first page carries an illustration used by courtesy of the University Museum, University of Pennsylvania, and reproduced from an ancient frieze discovered in Ur of the Chaldees. The frieze, thought to have been made about 4,000 B. C., contains figures of cows, calves and dairymen, and represents various steps in the handling of milk.

The article contains many pertinent facts relating to milk. Particular attention is given to the importance of this food product from a sanitary and public health standpoint. The process of pasteurization is described. Eight queries dealing with pasteurization are answered in a concise manner. The significance of careful pasteurization as an essential procedure in adding the final factor of safety to public milk supplies, is emphasized.

This article will be of great interest to the thousands of readers who receive the Iowa Public Health Bulletin. In so far as this number of the Bulletin will lead to improvement of the quality of our public milk supplies and to betterment of the public health, it will be of direct benefit to producer, distributor and consumer alike.

TYPHOID FEVER IN WAYNE COUNTY

The occurrence in Corydon, during the latter part of August and September, of twelve cases of typhoid fever, represents the most serious outbreak of this disease in the state thus far in 1933. Six of the patients were males and six were females; ages of the patients varied from ten to fifty-four years; one death occurred.

Information obtained from attending physicians, patients and relatives indicated that those who became ill had been in Corydon all or the greater part of the time during the weeks immediately preceding the epidemic. Search for a common factor in this group of cases indicated that the city water supply played no part in the spread of infection. Nine of the patients used milk from the same dairy and two

(Continued on page 639)

The JOURNAL of the Iowa State Medical Society

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PHYSICIANS AND FEES

A few weeks ago the physicians in Telfair County, Georgia, agreed "not to visit anyone whose name appears on the delinquent or bad pay list except for cash in advance." Apparently the public press felt that the signing of this agreement constituted news, for news it promptly became.

It is interesting indeed to observe the various attitudes assumed by the several editorial writers. To some this action was greeted with indignation and protest, and the physician's duty to humanity was largely stressed. To others the action appeared justified and the laborer considered "worthy of his hire." After all, however, is there anything unusual in the attitude of a physician or group of physicians attempting to conduct their business upon lines recognized as sound in other business procedures? Is the compilation of a dead-beat list any more reprehensible because the debtors have failed to meet their obligation to a physician than a list compiled because they have failed to pay their baker, their butcher, or their candlestick maker? Has the public been unaware of the fact that physicians have for many years made use of and contributed to commercial rating bureaus? Is the public unaware of the special rating list compiled by various medical groups throughout the country, listing patients who refuse to retire their accounts? If the public is unacquainted with these facts, the medical profession has only itself to blame, since from time immemorial physicians have stressed the humanitarian aspect of the profession and have belittled or ignored the economic side.

Over the many years during which this concept of medical ethics has been fostered, both the public and the profession itself have benefited from it. In times of stress, however, hardships may be suffered by the magnanimous physician who is required to sit calmly by and observe his debtors indulging luxurious tastes and spending freely for unnecessary pleasures while his fees, long overdue, remain unpaid.

The situation which has created such a furor occurred in Georgia, but Iowa could have furnished the setting for the scene. A metropolitan daily, published in Iowa, under date of September 26th, cast a feature article with these headlines: "Doctors and lawyers among 300 men being given free meals and place to sleep in new Salvation Army Relief Building on west side here."

Again, I would quote from a letter recently received from an Iowa colleague who, after over thirty years of practice in a single location, has found it necessary to remove his office or suffer privation. He writes:

"Also, when a doctor gets about $20,000 on his books, nine-tenths of the people owe him and that doesn't make bosom friends. Our system of medical practice will have to change or die out."

Despite the expressed opinion from members of the laity to the contrary, physicians have suffered more perhaps during the period of economic depression than any other single group. Rare indeed is the practitioner whose actual income today exceeds thirty to fifty per cent of that of three or four years ago. When we consider that the average income of physicians as estimated three or four years ago amounted to less than $3,000, it becomes evident by simple mathematics that hundreds of physicians, here in Iowa alone, are today not collecting sufficient revenue upon which to live. What are these physicians to do? Some may hit the breadline; some may seek new locations; others may seek a new occupation; but isn't it rather unfair that these conditions should exist, particularly when a physician's practice is among a class of people who, while suffering from reduced incomes, are still spending freely for luxuries which he himself is denied?

Some would challenge any movement from physicians to promote better collections as a commercialization of a time-honored and dignified practice and would cause us to believe that any movement on our part will hasten the socialization of medicine along the lines suggested in the Final Report of the Committee on the Costs of Medical Care. Why this should be so one fails to appreciate, but be that as it may, the physician, who under our present system cannot and does not collect a sufficient revenue from his patients upon which to live and educate his family, will be forced from the practice of medicine unless he can receive relief either through the adoption of business methods in his collections or through some plan of socialized medicine guaranteeing such a living.

MINNESOTA'S UNEMPLOYMENT RESEARCH

No problem at the present time is engaging the undivided attention of the government, philanthropies and the medical profession as is that of unemployment. Daily the physician encounters in his practice, organic or functional disease, which in many instances is the direct result of the breakdown in morale observed among unemployed persons.

In the September issue of the JOURNAL attention was directed editorially to an organized plan developed at the University of Minnesota for the study of economic aspects of unemployment, for the institution of methods in individual diagnosis and retraining of the unemployed, and finally for the development of public employment agencies to secure relief. This colossal research plan is actually under way and the results of some of their early observations have been published.

Pioneering in practical sociology and psychology, the Employment Stabilization Research Institute has investigated the fate of 500 individuals who a year ago had passed through the model employment offices operated by the organization in cooperation with the state. The results are informing. Less than 40 per cent of the 500 individuals who were studied had found any employment that lasted as long as one month during the period. Of the 500, only 42 had found employment and were working when this survey was made. The others worked only a few months at jobs on a much lower occupational level than those usually followed by the individual, and employment terminated by being "laid off." Forty-five per cent of the 500 had been unemployed two years or more before the first of this year. Relatively few of this group had found re-employment. Greater success marked the efforts of those under forty-five years of age than the group past forty-five.

Important and disheartening is the fact that a definite breakdown in morale was observed in the majority of the persons who have been reduced to destitution through prolonged unemployment. Shattered morale manifests itself in apathy, resignation, panic despondency and anti-social behavior. While it has been commonly recognized that unemployment affects mental health by imposing strain and anxiety on people, and that the reaction of the individual will depend upon his adaptive capacity, solid, unequivocal statistics on these matters, particularly as they apply at the present time, have not been compiled.

The work of the Minnesota Research Group is still in its elementary stages, but those responsible for the endeavor are to be complimented and commended for undertaking this problem. While we all hope that economic relief is only a few months distant, nevertheless the endeavor of the Minnesota Research Institute may furnish a background of data which may prevent untold suffering, when and if another depression occurs, and may offer a foundation for beginning appropriate treatment of those individuals, who for many years may suffer mental illness as a result of mental strain during unemployment at this time.

SCIENCE AND SALES

Several months ago in these columns we discussed the broadcasting of bloodcurdling and gruesome advertising skits over the radio. The matter was taken up by parent-teachers' organizations and the public press, with the result that this evil, to a large measure, has been corrected. It now seems timely that attention be directed to the flagrant, unauthorized and misleading use of medical evidence and testimony by certain manufacturers to advertise their products, particularly by radio broadcast.

"Doctors say, use Hokum mouth wash," or "Physicians agree that Vitamins P, Q, R, S and T found only in the Bokum breakfast food are essential to the proper growth and development of your child." What doctors *say,* and what physicians *agree?* One doubts that any physician has been consulted by the particular firm employing such expressions, or if a physician has been consulted, one questions his right as an authority to express an opinion. Certainly such statements are intended to convey the thought that the manufacturer has obtained authorized medical approval for his product, and in this implication, the manufacturer oversteps propriety.

Other advertisers are not content to employ generalities as cited above, but freely quote the American Medical Association and individual physicians high in medical authority to justify their claims. Here again circumvention is necessary. A highly regarded and competent authority may have determined that measurable quantities of calcium and phosphorus are required in normal metabolism and may have published his findings in the Journal of the American Medical Association. The wily but not too scrupulous manufacturer may use this report as follows: "Our so-and-so chocolate drink contains the life-giving salt of calcium and phosphorus proclaimed by the American Medical Association as essential to health," or perhaps, "Our so-and-so chocolate flavored drink fully meets the body requirements in calcium and phosphorus recently proclaimed by Dr. Wellknown of Carvard Medical School." In

the former statement the public is led to believe that the American Medical Association favors the use of the product, while by the latter statement the public is permitted to believe that an eminent physician recommends the product.

Another group of advertisers employ still a different plan to assure the would-be purchaser of the confidence placed in their product by high medical authority. Statements made by, or quoted from, an alleged physician are introduced into the advertisement with a statement that Dr. so-and-so is chief of the research staff of the concern. What if he is a licensed M.D.? Unfortunately this fact alone does not guarantee his knowledge or sincerity. Men cannot live by bread alone and sometimes the endorsement or recommendation required by a manufacturer may not only supply bread, but also some meat and potatoes, and in some cases even ice cream and cake. Here again the deluded public, not sufficiently well informed to know that Dr. so-and-so may not be a competent scientist, comes to the erroneous conclusion that the product in question is the physician's mainstay in combating the ills of mankind.

While the methods above described are perhaps the more common ones, from time to time others appear. All bear in common an unauthorized and unauthentic illusion of medical sponsorship. Of the many medical qualities attributed to the products offered under this thin, but apparently effective guise of medical sponsorship, the most flagrantly flaunted, perhaps, are those claiming to meet the body need in vitamins. Newness lends enchantment and spectacular announcements always claim public attention.

Scientific research during the past decade has extended to a remarkable degree our knowledge concerning the action and needs of vitamins in the body and called again to general attention spectacular results empirically discovered years ago. The recognition of a vitamin as the potent factor in the dramatic conquest of scurvy and beriberi is sufficiently new and spectacular to arouse public interest, but it required the testimony of the astounding results of the antirachitic vitamin in the prevention of rickets, to touch off the tender of the faddist and make the term "vitamin" a household word. This widespread public interest has been capitalized by manufacturers, and if we are to believe their advertising propaganda, we can now secure the required vitamins in our daily portion of breakfast foods, canned goods, chewing gum, cigarettes, or even in our favorite confection. While one would certainly not wish to depreciate the essential rôle played by certain vitamins in the human economy, one cannot fail to question the need or value of all this unscientific vitamin therapy which is tendered to us by enterprising manufacturers. However, busy with the particular problems of our immediate practice, we are apt to shrug our shoulders and dismiss the subject with the comment that the lay public now and always will be faddists, that they delight in being humbugged, and finally that there is little, after all, that we can do about it.

True, too true, but if we assume the attitude that there is nothing to do about it, nothing will be done. Who will practice medicine—the physician, or the commercial manufacturer? Certainly, inasmuch as our knowledge of vitamin insufficiency and over-sufficiency is now incomplete and new discoveries may disclose unthought of danger in the indiscriminate use of vitamins, we are not justified in assuming an attitude of indifference while commercial advertisers saturate the minds of the public with pseudoscientific vitamin propaganda, and their bodies with unassayed vitamins themselves. Certain pathologic states have been observed and recorded from the over-use of certain vitamins. It is entirely possible that other conditions less obvious and perhaps more insidious in their manifestations, occur as a result of unbalanced diets.

Further, we must not lose sight of the fact that a real need for active vitamin therapy may be neglected by the individual who places his confidence in the use of products of questionable or undemonstrated value in this particular element. Let us then as physicians register a vigorous protest, and sound a warning before serious damage is done.

FEDERAL HEALTH SURVEY

After several years of severe economic stress, the gross death rate of the American people has attained the lowest level on record. Infant and tuberculosis mortality have not increased in the country as a whole; on the contrary, they have continued to decline. These existing conditions have directed our attention to the advantages of "tightening the belt," and returning to "simpler and saner living," during times of economic stress. Others have offered the explanation that any ill effects have been prevented by an efficiently conducted health service and program of social relief.

However, the death rate, in itself, is not an adequate criterion of the extent of sickness and impairment of health. The death rate is not immediately affected by unfavorable living conditions unless starvation and pestilence actually exist. There is no measure by which we can immediately judge the decreased resistance to disease. Fur-

thermore, the gross mortality rate for the nation as a whole does not reveal whether or not certain classes are suffering from ill health; the actual increase in illness and mortality among that fraction which has been reduced to poverty by the depression, may be masked by the general downward trend of the mortality among the more fortunate classes.

In an effort to appraise the situation as accurately as possible, the United States Public Health Service conducted a survey of the prevalence of sickness and malnutrition in representative communities known to be severely affected by unemployment. Information obtained from this inquiry shows that the situation is not nearly so favorable as we have been led to believe. Malnutrition among school children has increased, in some localities at least; higher infant and tuberculosis death rates have been experienced in certain areas of New York where the unemployment problem is most acute; and cases of mental disease are on the increase.

The highest illness rate is reported by a group which was in reasonably comfortable circumstances in 1929, but which had dropped to comparative poverty by 1932; their rate is 60 per cent higher than those in the same class who suffered no drop in income. The "chronically poor" individuals, that is, those who were in a condition of poverty even in 1929, show a relatively low sickness rate as compared with the group which suffered a loss in income as a result of the economic depression.

The investigators have purposely refrained from drawing any general conclusions from their findings, since they feel that additional study is required, and that conclusions and interpretations should be based on a more complete analysis of the data collected.

MEDICINE IN SOVIET RUSSIA

Russia is an experiment station conducted on a grand scale without parallel in the history of the world. However, little is known of Russia from the medical point of view. Most important of the various contributing causes for this ignorance is the fact that conflicting reports of the advantages and disadvantages of the system are received from authors who are presumably authorities in their particular fields. One author praises, one condemns; one is bored, one is stimulated; one sees a hope of great things in the future, and one sees nothing but darkness and gloom in the future of Russian medicine. As one of the authors said, "Time alone will tell whether the nation is heading for prosperity or disaster."

The great English statesman, Gladstone, over fifty years ago, uttered the economic principle: "The health of the people is the wealth of the nation." Lenin, the keen and prophetic leader of Soviet Russia, realized this fundamental truth and, through the Five Year Plan, an intensive and extensive course of education is being developed, which is designed to conserve the health of over one hundred and sixty million people. The leaders of the governing party realized that their goal of industrial and agricultural independency could not be attained unless the workers were in the best of health. In Russia, disease is no longer a private and personal matter. Since every inhabitant is a social and economic unit, disease is looked upon as harmful to the State, and the restoration to health, the prevention of disease, and the cultivation of positive health, are regarded as State responsibilities. It is necessary to understand this underlying motive in order to appreciate the great amount of attention and money, which is being spent in health projects, as compared to the lack of money obtainable for the finer things of life, which we Americans have come to consider necessities.

In 1918, Dr. N. A. Semashko was appointed commisar of health. Because of his excellent ideas of organization and his ability to choose competent subordinates, he achieved a remarkable success. It was his plan to make all doctors, nurses, and pharmacists, civil servants, and to make all hospitals, sanatoria, and drug stores, state institutions. It was not until five years after the revolution, however, that any well organized form of state health insurance could be undertaken. Though the general principles and the coordination of this work depended upon central headquarters in Moscow, the actual provisions for health service had to be allotted to clinics and institutions of local health departments, the latter receiving subsidies from insurance funds. Against much opposition on the part of the medical profession, a Medical Workers' Union was organized to include doctors, nurses, druggists, laundresses and chauffeurs. Prejudices against this union were gradually overcome and the meetings of the combined medical personnel led to a better understanding of the medical situation and to better cooperation among the different groups.

From the first, Dr. Semashko stressed the importance of prophylactic measures for the reduction of tuberculosis, venereal diseases, and epidemics. A great variety of forms of propaganda are made use of for the education of the masses in these health measures. There are public lectures, newspaper articles, moving pictures, radio talks, large artistically colored medical posters, health museums, and traveling exhibits.

The medical schools of Russia are conducted in a very much different manner than those in the United States. Each medical faculty is divided into three parts: (1) a curative-prophylactic faculty for the preparation of internists, surgeons, and dentists; (2) a hygienic-prophylactic faculty for the preparation of public health officials, epidemiologists, food hygienists, etc., and (3) a faculty for maternal and child welfare for training obstetricians and pediatricians. A medical student is, therefore, required to specialize almost from the beginning, and he graduates as a specialist, rather than as a general practitioner. There are more women students than men. In addition to the regular medical studies, students must have economics and military training, and must study sociology. During their course, they are taken into factories to study the sanitary conditions there, into the public schools to examine the conditions under which pupils work, and into the overcrowded homes of the masses to see where the hygienic defects lie. Thus the medical schools lay great stress upon the social service point of view and upon a knowledge of the methods of preventing disease as well as upon that for treatment of disease. The medical schools have been placed under the Department of Health rather than under the Department of Education, and thus are to be regarded now as technical schools instead of university departments. Each doctor must work six hours daily for the state, after which he may treat any such patients as desire him. For this outside work he may receive additional remuneration. It has not yet been possible to realize fully the ideal of making competent medical care accessible and free to all in the institutions organized by the state, and it is because of the delay due to insufficient personnel that the doctors still have some private practice. It is believed, however, that private practice is doomed ultimately to be wiped out, as the number of physicians increase and as state institutions are multiplied. Doctors are ordered to answer any emergency calls they may receive, but in case an emergency did not truly exist, the family calling the physician is heavily fined.

Because of the doctors graduating as specialists, it became necessary to organize them into groups or "unitary dispensaries," each such dispensary serving a district of some 30,000 people with approximately 1,000 daily visits from patients. At a dispensary, every person in the district must report for examination, whether he be sick or well, and he is studied, rather superficially as yet, by a group method of diagnosis, the results of the study being placed in the worker's "Sanitary Diary," a booklet that each visitor must present on his periodic returns to the dispensary. The social diseases and the collective measures for the prevention of disease receive the greatest stress. The conditions of the different occupations are carefully studied and the living conditions of the people in their homes are investigated with the object of instituting suitable preventive methods.

The number of institutes of research has been markedly increased in the larger centers since the advent of the Soviet Regime. There is a tendency to place at the heads of the newer institutions, young scientific workers who are socially and politically in tune with the present authorities. In every scientific institute, in addition to the scientific director, there is a Red director, who controls the budgets, and approves the appointments. Though religion is still to a certain extent tolerated in Russia, religious organizations are not permitted to do social service work or charity medical work. One native professor, who had made important discoveries in histology and physiology, but who had religious tendencies, was transferred from the post he held to another in which he could do no harm. It is reported that there are about 120 medical journals in Russia, this number including those published in languages other than Russian. The results of the more important scientific researches are, however, still being published abroad. Formerly, they were sent to French journals, but now, owing to the political situation, the German archives are more popular.

(To be concluded next month)

TISSUE REACTION TO THE X-RAY

Observations made in the research laboratory at the Mount Vernon Cancer Hospital in London, shed much light upon the long unsolved problem of what occurs in living tissues after they have been subjected to the action of the x-ray.

It has been noted that if a limited area of skin is exposed to the action of the x-ray and immediately thereafter a solution of Pyrrol blue is injected into the circulation, within twenty-four hours the rayed portion of the skin will assume a blue color precisely corresponding to the area rayed. The observers interpret this observation as indicative of a change occurring in the capillary blood vessels, rendering them more permeable to both water and salt.

Dr. J. C. Mottram, director of the laboratory, commenting upon this observation, states: "It is to be hoped that this new reaction with Pyrrol blue, when fully exploited, will elucidate some of the hidden changes which occur during the latent period."

The General Program of the American Red Cross

The demands made upon the American Red Cross during the past twelve months by the exigencies of the depression have been unequalled since the World War days. In meeting this challenge, the Greatest Mother again proved the power of her ideal to inspire millions of volunteers to the service of their fellows. With the same devotion, the same unsparing selflessness of 1917, hundreds of thousands of men and women meet the needs of the hour. They help the Red Cross to make history, and through their loyalty and courage, in routing the forces of the depression, they maintain the morale of the American people until the turn of the tide again brings in the strong, refreshing currents of normalcy.



Red Cross effort was not limited even to the gigantic task of distributing among some 6,000,000 families of the unemployed, 85,000,000 bushels of wheat and 104,000,000 garments made out of Congress' gift of 844,000 bales of cotton. In addition to this nation-wide relief project, her customary activities were carried on as usual.

The American Red Cross Nursing Service is the reserve of the Army and Navy in time of war. On its roster are 31,000 graduate nurses, ready for active duty whenever their country calls. Of these 700 are in the Red Cross public health service. These inspected more than a million school children and made an equal number of home visits, doing bedside nursing, giving instruction to young mothers, as well as prenatal and postpartum care.

Among the most popular services of the Red Cross are the two systems of health and safety-first instruction known respectively as Home Hygiene and Care of the Sick, and First Aid and Life-Saving. The former teaches the elementary facts of health and sanitation and gives simple instructions for the care of minor illnesses in the home. Many of our leading cities make Home Hygiene a required subject in the curriculum. First aid courses, since the establishment of this service, have equipped more than 1,120,000 individuals to give prompt and intelligent attention to accidents, and have so cut down the toll of casualties in industry that some insurance companies have introduced lower rates of group insurance in plants and firms where a knowledge of first aid is made compulsory on the part of the foremen and superintendents. Last year 35,000 students of Home Hygiene were awarded certificates and 65,000 First Aid certificates were issued.

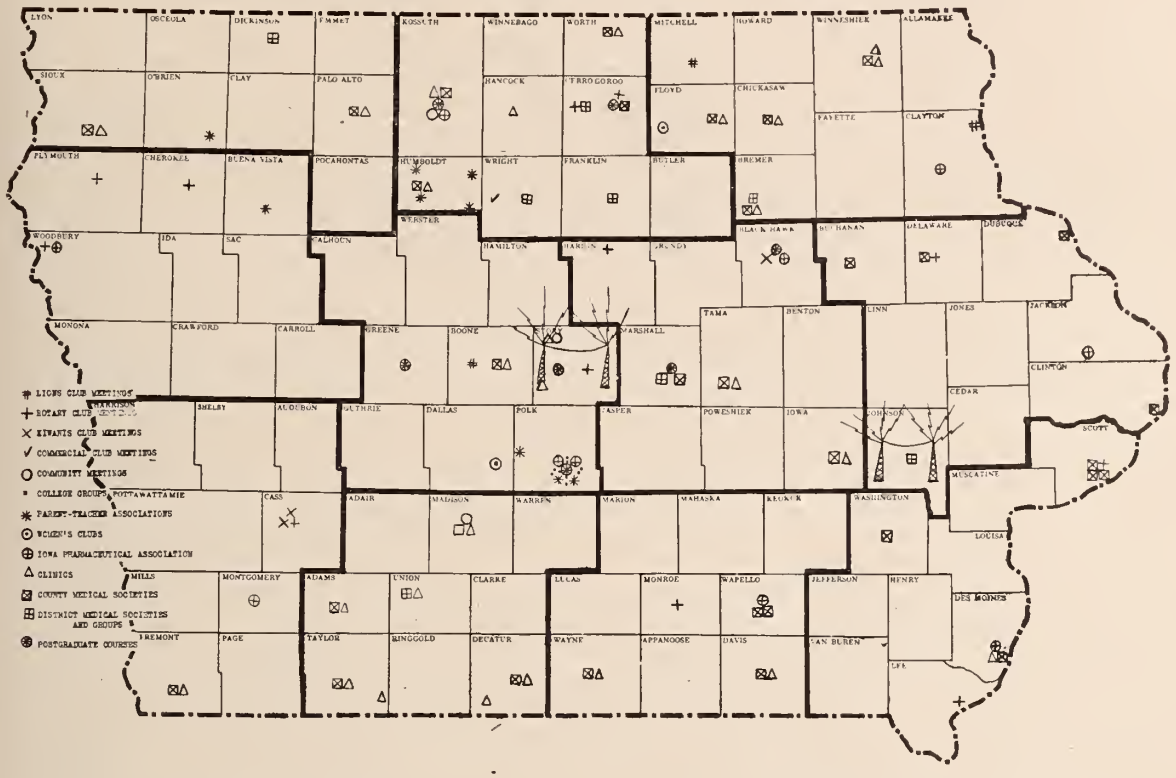
Production of garments and surgical dressings has a permanent place in the volunteer service, inasmuch as even in normal times there is always a demand for layettes for mothers who lack the means to supply them. Warm clothing for needy school children, dressing gowns, night garments and sweaters for ex-service men in our government hospitals, and clothing necessities are also supplied.

During the past troubled year, the canteen service has found many new ways of serving the needs of the hour. Its members have helped to can and dry vegetables and fruits for unemployment relief. Some chapters have, through the generous cooperation of local dairies, maintained milk stations. Many canteen workers have volunteered day after day in centers where hot school lunches were being served, or in supplying disaster workers with hot coffee, sandwiches, etc.

Special courses in the technic of volunteer assistance in hospitals, both to busy doctors and nurses, and as "errand girls" for patients, ministering to them as their physicians may recommend, have qualified hundreds of women of all ages to wear the uniform of the Health Aides and Gray Ladies.

Such are the activities of the adult members of the Red Cross. The Junior Red Cross is an army of 7,000,000 school children whose motto is "I Serve." In such ways as are suited to their capacities these boys and girls carry on in schools, homes and communities, projects that make for character building, civic responsibility, and that spirit of Good Samaritanism which is the very essence of Red Cross service. Renewed memberships pledged between Armistice Day and Thanksgiving finance this vast Red Cross program.

SPEAKERS BUREAU ACTIVITIES



MEETING OF MERIT

The "meeting of merit" for October is the autumn meeting of the Marion County Medical Society. On October 27 the members of this county held a joint meeting with the Marion County Veterinary Medical Society at Pella. Veterinarians, physicians and their wives from Marion and several of the neighboring counties were in attendance.

In the afternoon the ladies were entertained at the home of Dr. C. I. Fox. The physicians and veterinarians enjoyed a symposium on "Tuberculosis," by the following speakers: R. A. Fox, M.D., of Charles City, The Surgical Aspects of the Disease; H. C. Payne, M.D., of Pella, The Medical Phases; and T. G. Fultz, D.V.M., of Pella, The Veterinarians' Rôle in Dealing with the Disease. The program was well discussed.

In the evening, after a delightful dinner at the Elmwood Inn, an interesting program of impromptu talks was given, with Dr. T. G. Fultz acting as master of ceremonies. The speakers were: Dr. Charles B. Taylor, President of the Iowa State Medical Society; Dr. H. A. Spilman, Chairman of the Council; Dr. Evon Walker, Secretary of the Wapello County Medical Society; and Drs. John H. Peck, J. A. Barger and D. J. Glomset of Des Moines. There were sixty-five dinner and evening guests.

These medical-veterinarian meetings have been annual events in Marion County since the initial gathering held eight years ago. They have been very successful as is evidenced by the repetition from year to year.

A PICTORIAL REVIEW

The map printed above gives a pictorial review of the activities of the Speakers Bureau during the present year. The figures represent the different types of meetings to which the Bureau has sent speakers, or helped with the plans of the program in some way. The centers in which the postgraduate courses were held this year are indicated, as well as the two radio stations that so very generously contribute time for our health education broadcasting. Some of the societies that have had no meetings have been reached, nevertheless, since the meetings in adjoining counties have drawn physicians from surrounding towns to those centers.

If your county is one which has not been reached this year by the Speakers Bureau, we shall be glad for you to inform your local organizations that the Bureau is anxious to be of service to them.

RADIO TALKS

WOI—Fridays, 4:00 p. m.

WSUI—Thursdays, 8:00 p. m.

November 3—Use and Abuse of Cathartics—M. B. Galloway, M.D.

November 10—Bronchitis—Ben F. Wolverton, M.D.

November 17—Man's War Against Germs—D. J. Glomset, M.D.

November 24—Indigestion—C. L. Nelson, M.D.

THE OPEN FORUM

FLOOR TAX ON COTTON PRODUCTS

The Inquiry

To Collector, Internal Revenue,
Des Moines, Iowa.

Will you please give me information as to how the new processing tax on cotton will affect the physicians in general practice? Most physicians keep in their office small quantities of cotton, such as cotton, bandages, gauze, and adhesive plaster.

It is not sold as such, but as a part of the service which the physician renders the patient. Will the physician be classed as a consumer or a seller of cotton? This information I wish to pass on to the county medical societies in this part of the state.

C. A. Boice, M.D.,

The Reply

C. A. Boice, M.D.,
Washington, Iowa.

In reply to your inquiry, you are advised that the floor tax on cotton products held in the inventories of any physician who is the ultimate consumer of such cotton products would not be subject to the floor tax. However, in cases where the physician is not the ultimate consumer and such products are sold and separate charges made for such products, the tax would apply.

In the future when physicians purchase cotton products, the tax, of course, will be either shown on their invoices as a separate item, or added to the purchase price of such item.

If there is any further information you desire, kindly advise and same will be forwarded to you.

Chas. D. Huston, Collector.

WE APOLOGIZE

October 17, 1933.

Journal of Iowa State Medical Society,
Des Moines, Iowa.
Dear Editor:

I wish to call your attention to the article in the October issue of the JOURNAL entitled, "Meeting of Merit," in which you stated that, "The Buchanan County Medical Society, which has been *inactive,* held a meeting the last of September to reorganize and take an active part in the State Society Program."

The facts are that the Buchanan County Medical Society was invited to attend a meeting at Manchester for the purpose of reorganizing the Delaware County Medical Society. The Buchanan County Medical Society has been continuously in harmonious existence for years.

Dr. M. C. Melrose, Secretary,
Buchanan County Medical Society.

CANCER RESEARCH

Editor of the Iowa State Medical Journal.
Dear Doctor Simmons:

You will find herewith a little squib on the work in malignancy under way at the California Institute of Technology, where I have been very courteously received and accordingly instructed. It is a great place to pioneer in any line of the physical and biological sciences.

I wondered if you might be interested in using these facts, possibly on your editorial page or as a brief article in the Journal.

I shall be returning to Des Moines about the first week of next month, and shall be glad to see you all.

Very truly,

Dr. W. E. Sanders.

THE LAURITZEN SUPERVOLTAGE TUBE AND THE CANCER PROBLEM

When a million volts of electromotive force is directed through a properly constructed vacuum tube carrying two thousandth amperes of current, an emanation of radiant energy equal to that of five hundred grams of radium is produced. Such an achievement was attained with the building and installation of the Lauritzen x-ray tube at the California Institute of Technology some four or five years ago. This tube has now functioned satisfactorily under a force of from one thousand to twelve hundred kilovolts for more than two years. It made possible the shortest x-rays available for therapeutic use, and has been extensively used under proper control for the treatment of malignancy. The tube is about thirty feet long, and its bulb is enclosed in a lead cylinder about two inches thick, and properly fenestrated in its passage through the treatment room. The tube and its entire electric setup, exclusive of housing, was built for the Institute at an expense of less than ten thousand dollars.

It is generally believed that the tissue effects of radiation are not due to the direct impact of gamma rays on the cells, but rather to those secondary rays generated by direct hits of the gamma rays on the atoms of the tissues. While the gamma rays decrease with the square of the depth of tissue penetration, the secondary rays are proportionately increased, although limited in their range of activity to a millimeter or so from their source of origin. Accordingly, in the treatment of deep malignancy, the aim has been to secure a maximum of penetration of ultra short waves by superfiltration. While at a depth of ten centimeters the commercial two hundred kilovolt tube yields an efficiency of only about thirty per cent of its surface

effect, the one thousand kilovolt tube yields about fifty per cent.

One familiar with the histology of carcinoma knows that the grade of malignancy depends, not alone on the character of the malignant cell, but equally on the defense mechanism of the surrounding stroma. The aim of x-ray radiation is, therefore, to inflict a maximum injury to the malignant cell, with a maximum stimulation, or at least a minimum inhibition to the defensive connective tissue. Whether the difference between a thirty and fifty per cent depth efficiency shall prove of material advantage in the radiation of malignancy is not yet definitely determined, although the results so far attained are encouraging. The tendency now is to divide the dosage into several small fractions spread over a long period of time, rather than the massive single or few treatments formerly in vogue. Already more than one hundred autopsy studies have been made of patients treated with the giant tube.

IOWA PUBLIC HEALTH ASSOCIATION MEETING

Attention is directed to the annual meeting of the Iowa Public Health Association which will be held Wednesday, November 22, at the Hotel Fort Des Moines, with the following program:

Morning Session

8:45 Registration.

9:15 Presiding—J. F. Aldrich, M.D., President, Iowa Public Health Association.
Address of Welcome—Walter L. Bierring, M.D., Commissioner, Iowa State Department of Health.

9:30 The Detection and Supervision of Typhoid Carriers—A. J. Chesley, M.D., State Health Officer, Minnesota Department of Health.
Discussion opened by Carl F. Jordan, M.D., Epidemiologist, State Department of Health.

10:30 Rocky Mountain Spotted Fever.
Seeing the first case in Iowa in 1933—C. N. Freligh, M.D., Waucoma, Iowa.
Clinical Aspects of the Disease—H. E. Stroy, M.D., Osceola, Iowa.
Spotted Fever in Iowa—Carl F. Jordan, M.D., Des Moines, Iowa.

11:30 Chalk Talk, Accidental Deaths—Earle Brown, M.D., Secretary, Kansas State Department of Health.

Luncheon Sessions

12:30 Physicians' and Health Officers' Luncheon.
Discussion of Problems of Local Health Officers, conducted by M. E. Barnes, M.D., Professor Hygiene, Preventive Medicine and Bacteriology, University of Iowa.
Public Health Nurses' Luncheon—Presiding Edith S. Countryman, R.N., Director Public Health Nursing, Iowa State Department of Health.

Afternoon Session

2:00 Basic Principles in Preventive Programs—Fred Moore, M.D., Chairman, Committee on Child Health and Protection, Iowa State Medical Society.

2:30 The Kansas Diphtheria Prevention Program—C. H. Kinnaman, M.D., Epidemiologist, Kansas State Department of Health.

2:45 Increased Longevity in Dubuque During the Past Fifty Years—W. J. Connell, M.D., Health Officer, Dubuque, Iowa.

3:00 Round Table Discussion—Walter L. Bierring, M.D., presiding.
What Lay Organizations Interested in the Promotion of Health Can Contribute to a Statewide Health Program.
From the Standpoint of the Farm Bureau—Mrs. Ellsworth Richardson, Albia, Iowa.
From the Standpoint of the Parent-Teachers Association—Mrs. Chas. Pye, President, Iowa Congress of Parents and Teachers.
From the Standpoint of the American Legion Auxiliary—Mrs. Fred Johnson, Department Chairman, Child Welfare and Family Care.
From the Standpoint of the American Legion —Mr. Wm. Rathke, Chairman, Community Service Committee, State Department American Legion.
From the Standpoint of the Federated Women's Clubs—Mrs. M. N. Voldeng, Chairman, Public Welfare.
From the Standpoint of the Iowa League of Women Voters—Mrs. Minnie E. Allen, State Chairman, Child Welfare.

4:00 Echoes of Recent Public Health Meetings.
The Child Health Recovery Conference—J. H. Kinnaman, M.D., Director, Child Health and Health Education, Iowa State Department of Health.
Recent Activities of the State and Provincial Health Officers—A. J. Chesley, M.D.
Relative Merits of Toxoid and Toxin-antitoxin —C. H. Kinnaman, M.D.
Nurse's Viewpoint—Nellie Palmer, Director Health Education and School Nursing—Des Moines Public Schools.
The Walter Reed Memorial Meeting—Frederick J. Swift, M.D., Deputy Commissioner, Iowa State Department of Health.
Progress in Sanitary Works under the Public Works Program—Mr. A. H. Wieters, Director Public Health Engineering.
Trends in the American Medical Association and the American Public Health Association—Walter L. Bierring, M.D.
Additional Highlights contributed by Drs. W. S. Petty, W. J. Connell, M. E. Barnes, Mr. T. J. Edmonds and others.

Evening Session

8:00 Joint Meeting with postgraduate lecture course.
Address—The Recent Outbreak of Epidemic Encephalitis at St. Louis—J. P. Leake, M.D., Senior Surgeon, United States Public Health Service, Washington, D. C.

WOMAN'S AUXILIARY NEWS

Edited by the Press and Publicity Committee

MRS. OLIVER J. FAY, *Chairman,* 10 Thirty-fifth Street, Des Moines

Dallas-Guthrie Society

The Woman's Auxiliary to the Dallas-Guthrie Medical Society met in regular session, Thursday, October 19, at Panora, for a noon luncheon and afternoon meeting. After the business session, Mrs. E. L. Bower reviewed the book "A Lost Commander, Florence Nightingale." This was followed by roll call to which those members present responded by interesting current events.

Webster County

The Webster County Medical Auxiliary met for luncheon, Monday, October 16, at Wraywood for the initial meeting this fall. A report of the State Medical meeting was given by Mrs. W. W. Bowen, and Mrs. E. M. Kersten and Mrs. E. D. Morrison told of the state auxiliaries officers' meeting which they recently attended in Des Moines. Plans were discussed for a dinner which the auxiliary will give to the county medical society at Wraywood. The Webster Auxiliary was organized last March and has a membership of twenty-five members with the following officers: Mrs. Edward D. Morrison, president; Mrs. Otto Paul, vice president; Mrs. F. L. Knowles, secretary; and Mrs. E. M. Kersten, treasurer.

The Fall Board Meeting of the Woman's Auxiliary to the Iowa State Medical Society

The annual fall board meeting of the Woman's Auxiliary to the Iowa State Medical Society was held Friday, October 27, at the Hotel Fort Des Moines. Fourteen members of the board and eight county presidents and committee members were present.

The president, Mrs. William Seidler of Jamaica, read committee appointments for the coming year, and they were unanimously approved by the board. Mrs. P. W. Beckman of Perry, first vice president, and in charge of organizational work, reported that there were fourteen county auxiliaries and that she expected to double the number before the year was ended. Mrs. Thomas A. Burcham of Des Moines, chairman of the legislative committee asked Miss Dorothy Nelson, secretary of the Speakers Bureau of the Iowa State Medical Society to explain the bill which will be sponsored by the Society and presented to the legislature during this coming session.

Dr. Robert L. Parker, secretary of the Iowa State Medical Society, spoke briefly, urging the women to do their part in increasing the membership of their respective societies. It is feared that the drop in membership will mean the loss of a delegate to the American Medical Association.

Among the interesting business approved by the board was the printing of a booklet containing suggested programs helpful to county societies. The president also asked the consent of the board for the Auxiliary to sponsor a High School Essay Contest limited to Junior High school students. The board also voted three money prizes to be awarded the first, second and third winning essays on a health subject to be chosen by the Education-Program Committee.

After the luncheon and business session the Auxiliary adjourned to attend a delightful tea given by the Polk County Auxiliary at the home of Mrs. Fred Moore.

The following committees will serve for the ensuing year.

PUBLIC RELATIONS COMMITTEE

Mrs. M. N. Voldeng, Woodward — Mrs. E. R. Posner, Des Moines
Mrs. Charles Kennedy, Logan — Mrs. Charles Taylor, Ottumwa
Mrs. A. S. Bowers, Orient

COMMITTEE ON REVISIONS

Mrs. W. W. Bond, Des Moines — Mrs. L. E. Kelley, Des Moines
Mrs. Channing Wolfe, Coon Rapids — Mrs. C. L. Putnam, Holstein
Mrs. C. P. Cook, Des Moines

COMMITTEE ON PRINTING

Mrs. I. O. Pond, Perry — Mrs. W. O. Smouse, Des Moines
Mrs. R. E. Parry, Scranton

PRESS AND PUBLICITY COMMITTEE

Mrs. O. J. Fay, Des Moines — Mrs. R. W. Perkins, Sioux City
Mrs. M. Charles Hennessy, Council Bluffs — Mrs. W. C. Porath, Storm Lake
Mrs. W. C. Newell, Ottumwa

EDUCATION-PROGRAM COMMITTEE

Mrs. Channing G. Smith, Granger — Mrs. W. E. Wolcott, Des Moines
Mrs. A. E. Merkel, Ankeny
Mrs. B. B. Miller, Tabor — Mrs. D. J. Glomset, Des Moines

LEGISLATIVE COMMITTEE

Mrs. T. A. Burcham, Des Moines — Mrs. C. A. Boice, Washington
Mrs. William Jepson, Sioux City — Mrs. H. A. Spilman, Ottumwa
Mrs. W. L. Bierring, Des Moines

HYGEIA COMMITTEE

Mrs. E. L. Bower, Guthrie Center — Mrs. L. A. Caughlin, Farmington
Mrs. W. W. Walvoord, Dunlap — Mrs. E. M. Kersten, Fort Dodge
Mrs. L. A. Royal, West Liberty

ORGANIZATION COMMITTEE

Mrs. P. W. Beckman, First Vice President, Perry
Mrs. A. J. Oliver, Second Vice President, Muscatine
Mrs. G. E. Harrison, Third Vice President, Mason City
Mrs. M. S. Campbell, Fourth Vice President, Malvern
Mrs. D. H. Hopkins, Glidden
Mrs. P. B. McLaughlin, Sioux City
Mrs. T. L. Wigim, Muscatine
Mrs. E. L. Emerson, Muscatine
Mrs. J. M. Donelan, Glenwood
Mrs. I. U. Parsons, Malvern

Historian, Mrs. P. B. McLaughlin, Sioux City
Parliamentarian, Mrs. Ralph H. Parker, Des Moines

SOCIETY PROCEEDINGS

Audubon-Cass Societies

The Audubon and Cass County Medical Societies held a joint meeting, Wednesday, September 27, at the Hotel Whitney in Atlantic. The group met for a six-thirty dinner, and after the business session, H. F. Hartje, M.D., of Adair, presented a paper on The Problem of Malnutrition in Children.

Boone-Story Societies

Another joint meeting of interest to the profession was that held Wednesday, October 18, by members of the Boone and Story County Medical Societies in Boone. The scientific program was furnished by O. L. Thorburn, M.D., of Ames, with a paper on Refractive Error Symptoms, which was discussed by F. E. Powers, M.D., of Boone, and Charles L. Updegraff, M.D., also of Boone. The next meeting of the two societies will be held at the Hotel Story in Nevada, Tuesday, November 21.

Mark C. Jones, M.D., Secretary.
Boone County Medical Society.

Calhoun County

The Calhoun County Medical Society met in Rockwell City, Thursday, October 26. For the scientific program, several members of the society presented discussions of interesting cases which had most recently come to their attention.

Clinton County

Thursday, October 5, the Clinton County Medical Society held its regular meeting at the Lafayette Hotel in Clinton. After the six-thirty dinner, Miss Lillian Henderson, newly appointed head of the Visiting Nurses Association, addressed the group. She asked that the society formulate some standing orders for the local Visiting Nurses Association to use in meeting our needs. It was the opinion of the society that if these measures were adopted wherever there is an organization of this nature, there would be more harmony between the physicians and nurses, and much of the dissension and dissatisfaction which has existed in the past, would be eliminated.

Mr. Leo Ford of the Medical Protective Company, spoke on medical legal subjects, pointing out the pitfalls into which physicians may stumble. This talk was one of the most useful and beneficial extra-medical talks we have had for some time.

Ralph F. Luse, M.D., Secretary.

Dallas-Guthrie Society

Howard L. Beye, M.D., of Iowa City, was the main speaker for the Dallas-Guthrie Medical Society meeting, held in Panora, October 19. His subject was Problems in Surgical Diagnosis.

Davis County

Two papers, one by C. D. Shelton, M.D., of Bloomfield, on Sleeping Sickness, and one by Earl Gilfillan, M.D., of Pulaski, on Diabetic Acidosis, featured the meeting of the Davis County Medical Society, held in the office of Dr. H. C. Young, in Bloomfield, Friday, October 13.

Floyd County

The regular monthly meeting of the Floyd County Medical Society was held Tuesday, September 26, at Charles City. The afternoon was devoted to a skin clinic conducted by James C. Kessler, M.D., of Iowa City. In the evening, after a six-thirty dinner at the Garden Cafe, Dr. Kessler presented a general discussion of interesting skin conditions.

J. B Miner, Jr., M.D., Secretary.

Hancock-Winnebago Society

A called meeting of the Hancock-Winnebago Medical Society was held at Forest City, Sunday, October 15. Dr. John H. Peck and Miss Ruth Walker, of Des Moines, associated with the Iowa Tuberculosis Association, reviewed the past work and records of the two counties. An organized system was worked out with the members of the society, enabling them to contact all former tubercular patients, in order to advise and urge thorough examination for tuberculosis at the present time. This is one of the first organized follow-up drives in the state, and will be interesting, not only from a medical point of view, but from an economic point of view as well.

W. F. Missman, M.D., Secretary.

Jasper County

Jacques Pierce Gray, M.D., assistant director of public health in San Francisco, California, addressed members of the Jasper County Medical Society, at a meeting held in Newton, Thursday, September 28. Dr. Gray's subject was The Encephalitis Epidemic in St. Louis.

Johnson County

The Johnson County Medical Society held its regular monthly meeting, Wednesday, October 4, at the American Legion Building in Iowa City. George C. Albright, M.D., presented a detailed report of a very unusual and perplexing case of obstruction of the superior vena cava, and E. M. MacEwen, M.D., reviewed the anatomy of the pupillomotor pathway with especial attention to the lesion which is responsible for the Argyll-Robertson pupil. Both papers were warmly received.

Horace M. Korns, M.D., Secretary.

Linn County Meetings

Arthur H. Parmelee, M.D., clinical professor of pediatrics, Rush Medical School, was the guest speaker for the Linn County Medical Society meeting held Thursday, October 12. Dr. Parmelee's subject was Complications and Care of the New Born, and his paper was discussed by Drs. George Murphy of Waterloo, A. B. Kuhl of Davenport, J. M. Hayek of Cedar Rapids, and L. M. Downing of Cedar Rapids. A ten minute paper on The Relation of Sinus Disease to Bronchiectasis was read by M. J. Foster, M.D., of Cedar Rapids.

Tuesday, October 31, we were honored by the presence of Chevalier Jackson, M.D., professor of bronchoscopy and esophagoscopy, Temple University School of Medicine, Philadelphia, whose address was entitled, Observations on Common Diseases of the Larynx from the View Point of the Pediatrician and General Practitioner.

Our next meeting is to be at Independence, Thursday, November 23, where R. A. Stewart, M.D., superintendent of the state institution there, will present a discussion and clinic on differential diagnosis, classification, and treatment of the more common types of insanity.

Thomas F. Hersch, M.D., Secretary.

Louisa County Annual Meeting

The Louisa County Medical Society met in Letts, Thursday, October 23, for its regular annual meeting. Dr. M. W. Lilly of Grandview, a retired physician, read a paper on the history of some of the difficulties and humorous incidents that occurred in early Iowa practice. Attorney F. A. Drake of Muscatine, addressed the group on Ancient Medicine as Viewed by a Layman. Officers elected at the business meeting are: Dr. L. E. Weber of Wapello, president; Dr. R. W. Tandy of Morning Sun, vice president; Dr. J. H. Chittum of Wapello, secretary and treasurer; and Dr. W. R. Smythe of Morning Sun, censor.

E. R. King, M.D., Secretary.

Pottawattamie County

A symposium on biliary tract disease was presented before the members of the Pottawattamie County Medical Society, Thursday, October 19, at the Jennie Edmundson Hospital in Council Bluffs. Speakers were: Sidney A. Portis, M.D., of Chicago, who discussed The Diagnosis and Medical Management of Biliary Tract Disease, and Lester D. Powell, M.D., of Des Moines, who brought out The Surgical Aspects of Biliary Tract Disease. Discussion of the two papers was opened by F. Earl Bellinger, M.D., and Gordon N. Best, M.D., both of Council Bluffs.

Arnold L. Jensen, M.D., Secretary.

Van Buren County

The Van Buren County Medical Society met in Keosauqua, Thursday, October 12, and the following program was presented: Burns, A. A. Johnstone, M.D. of Keokuk; Goiter, B. J. Dierker, M.D., of Fort Madison; and Diseases of the Breast, F. B. Dorsey, Jr., M.D., of Keokuk.

Wapello County Meetings

Dr. S. A. Spilman, dean of medicine in Wapello County, and past president of the Iowa State Medical Society, was the guest of honor at a dinner given in Ottumwa, Tuesday, October 17, at the Wapello Club, by members of the Wapello County Medical Society and the Ninth Councilor District. Dr. Charles B. Taylor, president of the Iowa State Medical Society, presided over the following program: Reminiscences, Walter L. Bierring, M.D., of Des Moines, president elect of the American Medical Association; Dr. Spilman's Local Medical Society Activities, Murdoch Bannister, M.D., of Ottumwa; Re-presentation of the Gavel, Frank M. Fuller, M.D., of Keokuk; Response, The Physician, S. A. Spilman, M.D., of Ottumwa; and Changes and Improvements, Thomas U. McManus, M.D., of Waterloo, past president of the Iowa State Medical Society. At the close of the meeting, which was well attended, a letter from Robert L. Parker, M.D., secretary of the Iowa State Medical Society, was read, announcing that Dr. Spilman had been granted a life membership in the State Society, in recognition of his many years of active interest in that organization.

The Wapello County Medical Society and the Sunnyslope Sanatorium will be hosts to the Ninth Councilor District and the four counties immediately east of Wapello, as well as other invited guests, at a dinner and scientific program to be held at Sunnyslope Sanatorium, Tuesday, November 21. The following program, over which Dr. John H. Peck, of Des Moines, will preside as toastmaster, will be presented: The Contribution of the Sanatorium to Tuberculosis, William M. Spear, M.D., assistant superintendent of the Iowa State Sanatorium at Oakdale; discussion by H. W. Vinson, M.D., of Ottumwa, and R. G. Carney, M.D., medical director of the Pine Knoll Sanatorium at Davenport; General Principles in the Treatment of Surgical Tuberculosis, illustrated with lantern slides, Arthur Steindler, M.D., professor of orthopedic medicine, State University of Iowa College of Medicine at Iowa City, discussion by W. C. Newell, M.D., of Ottumwa, and Jacob Breid, M.D., superintendent of the Fox and Sac Indian Sanatorium at Toledo; What the Modern Sanatorium Should Offer, Charles H. Sprague, M.D., superintendent of Broadlawns General Hospital at Des Moines, discussion by G. Raymond Johnson, M.D., medical director of the Sunnyslope Sanatorium at Ottumwa, and J. Carl Painter, M.D., superintendent and medical director of the Sunnycrest Sanatorium at Dubuque; and What Is It All About?, John H. Peck, M.D., of Des Moines, president of the Iowa State Tuberculosis Association. This promises to be an extremely fine meeting and it is hoped that those invited will try to be present. Other members of the profession particularly interested in this subject, are also urged to attend.

Evon Walker, M.D., Secretary.

Woodbury County

The Woodbury County Medical Society conducted its regular monthly meeting, Tuesday, October 24,

at the Martin Hotel in Sioux City. Arthur E. Hertzler, M.D., of Halstead, Kansas, professor of surgery, University of Kansas School of Medicine, gave an illustrated talk on Diseases of the Mammary Gland. Moving pictures on breast surgery were shown under the auspices of Mead Johnson and Company.

Lawrence E. Pierson, M.D., Secretary.

Austin Flint-Cedar Valley Medical Society

The fall meeting of the Austin Flint-Cedar Valley Medical Society was held in Charles City, Wednesday, October 4, with the following program: The Occipitoposterior Position in the Practice of Obstetrics, Robert D. Mussey, M.D., of the Mayo Clinic, Rochester; Early Recognition of Heart Failure, John C. Shrader, M.D., of Fort Dodge; Personal Impressions of Russian Hospitals, T. A. Burke, M.D., of Mason City; Associated Pathology and Complications of Appendicitis, James E. Whitmire, M.D., of Sumner; and General Principles Involved in the Treatment of Fractures, Howard L. Beye, M.D., Iowa City. Dr. Richard E. Scammon, dean of medical sciences at the University of Minnesota, was the speaker for the evening banquet. His address was entitled The Origin and Early History of St. Bartholomew's of London—A Typical Medieval Hospital, and was supplemented with lantern slides. The concluding after-dinner entertainment was a one-act play, "Good Medicine."

Southeastern Iowa Medical Society

The annual meeting of the Southeastern Iowa Medical Society was held in Davenport, Wednesday, October 18. The afternoon program consisted of clinics conducted by Davenport physicians and surgeons. Edwin F. Schneiders, M.D., of the Dean Clinic, Madison, Wisconsin, was the speaker of the evening after the six-thirty banquet held at the Hotel Blackhawk. Dr. Schneiders spoke on Gynecologic and Obstetric Emergencies. Officers elected at the business session are: Dr. John I. Marker of Davenport, president; Dr. A. A. Eggleston of Burlington, vice president; and Dr. Carl J. Lohmann of Burlington, secretary and treasurer.

INTERESTING NEWS

In Brief

A book on first aid was published as long ago as 1633.

Nearly 600 counties in the United States have health officers who devote their entire time to their official duties.

An International Congress for the scientific and social fight against cancer was held in Madrid, Spain, October 25 to 30.

Dr. Frank W. Ramsay of Bournemouth was elected president of the British Medical Association for 1934-35 at the annual session in Dublin.

During the calendar year, 1932, there were 26,168 deaths from automobile accidents in the death registration area of the United States, exclusive of Utah.

The St. Louis Medical Society has set a fee table and code, fixing a maximum fee for a surgical operation at $5,000. That isn't making the operation entirely painless.

Employing a dye stuff, fluorescein, German physiologists have determined by the reaction time of the dye that the average circulation time is approximately 21 seconds.

The University of Iowa College of Medicine reports the largest sophomore class, and second largest freshman class in recent years as a part of their total enrollment of 341 students.

Likewise, enrollment in the preparatory class of the University of Iowa School of Nursing has increased about twenty-two per cent over last year.

A malady among dogs known as "fright disease," a form of hysteria, has been cured by increasing the amount of Vitamin A in the diet of these animals. Similar observations have not yet been made upon man.

Described as an exact opposite of diabetes, a newly recognized disease called hyperinsulinism is characterized by symptoms of excessive hunger associated with weakness, nervousness, tremors, and mental laxity.

The State Superintendent of Insurance has interpreted the New York Insurance laws as prohibiting a group payment plan for hospital care. Before such a plan can be introduced into the state, appropriate legislation must be enacted.

Employing a new toxoid, representing the elements precipitated by alum from old toxoid, the Alabama State Health Department recommends a single injection of this toxoid as protection against diphtheria to replace the three injections formerly employed.

A complicated organic compound built up in the laboratory as a salt of various fatty acids made from petroleum is said by a young research worker of Ann Arbor, Michigan, to give excellent results in the treatment of ringworm infections of the skin.

Improvement in the basement and construction of a third floor addition to the Psychopathic Hospital at the University of Iowa for the use of the occupational therapy department, is planned at a cost of approximately $28,500, to be started early in November, according to university officials.

Research into the etiology of arthritis, conducted at Georgetown University, would indicate that cystine, a sulphur containing organic compound, is

markedly deficient in the tissues of arthritic patients; an observation which suggests colloidal sulphur as a possible effective treatment in this condition.

Vital statistics records of the Iowa State Department of Health show that in 1923, diphtheria accounted for the deaths of 239 Iowa children. As the result of a statewide program of diphtheria prevention this figure was reduced in 1932 to 62, and from January 1 to July 1, 1933, only sixteen deaths have been reported.

An English scientist of the Research Laboratory at Manchester, basing his suggestion upon the observations that methylene blue protects the respiratory enzymes from attack by carbon monoxide or cyanide, reasons that methylene blue may also be able to protect the respiratory enzyme from coal tar, preventing the development of malignancy from this source. This sidelight on cancer genesis is interesting, but apparently entirely unproved.

PERSONAL MENTION

Dr. Arthur Steindler of Iowa City was recently appointed to the board of governors of the Clinical Congress of the American College of Surgeons, to serve for a period of three years.

Dr. James Mueller has located in Fenton to begin the practice of medicine. Dr. Mueller was graduated from the State University of Iowa College of Medicine, and has just recently completed his interneship in the Highland General Hospital in Detroit.

Dr. W. E. Wolcott of Des Moines was elected governor of the Iowa-Nebraska District of Kiwanis International, at a recent meeting of that organization held in Grand Island, Nebraska.

Dr. Russell Patrick, who was graduated from the State University of Iowa and served interneships at Iowa City and St. Louis, has located for the practice of medicine in Marshalltown.

Dr. Andrew H. Woods of Iowa City spoke before a local parent-teachers' association, Thursday, October 19, on the subject, "The Child's Longing for Superiority."

Dr. P. J. Amlie has purchased the equipment of Dr. A. M. Stegeman in Tripoli, and plans to begin his practice there at once. Dr. Amlie is a graduate of the State University of Iowa College of Medicine, and comes to Tripoli from Covington, Kentucky, where he completed his interneship.

Dr. George Crabb of Mason City was the guest speaker for the local Woman's Club Thursday, October 12, taking as his subject, "Appendicitis and What People Should Know About It."

Dr. J. M. Standefer has purchased the instruments, equipment and drugs of the late Dr. W. E. Carpenter, and plans to remain in Tama, where he has just entered the practice of medicine.

Dr. Leroy F. Catterson of Oskaloosa, spoke before the Albia Rotary Club Monday, September 25, on "Advance of Medicine."

Dr. Arthur T. Bailey of Aurora, Illinois, has arrived in Clinton where he will open an office for the practice of his specialty—eye, ear, nose and throat diseases. Dr. Bailey is a graduate of the State University of Iowa College of Medicine, and prior to his year's practice in Aurora, was located in Jamestown, North Dakota, for six years.

Dr. Addison C. Page of Des Moines, addressed the Ogden Lions' Club Tuesday, September 26, on the cost of medical care of the people of the United States in the past, and on the prospects of the future care.

Dr. Harold W. Morgan, for the last two years a resident physician at the Ancker Hospital in St. Paul, Minnesota, has been placed in charge of the laboratory and x-ray departments of the St. Joseph's Hospital in Mason City. Dr. Morgan is a graduate of the State University of Iowa College of Medicine.

Dr. G. Raymond Johnson of Ottumwa was a guest speaker at the annual meeting of the Mississippi Valley Sanatorium Association held recently in Kansas City. Dr. Johnson spoke on "Abscess of the Lung."

Dr. Earl Gingles, who was graduated from the Nebraska University School of Medicine, has located in Onawa, where he will continue his practice of medicine. Since his graduation he has been associated with his father, Dr. W. W. Gingles, in Castana.

Dr. J. W. Myers of Sheldon was the speaker at the noon luncheon of the LeMars Lions' Club, Thursday, September 28, taking as his subject, "The Progress of Medicine."

Dr. H. J. Brackney of Sheldon spoke before the Sheldon Business and Professional Men's Club Monday, October 23, on "Identical Twins."

MARRIAGES

Miss Doris Mae Coover, daughter of Mrs. Bertha Coover of Kingsley, Kansas, and Dr. Elmer E. Kottke of Des Moines, were married Friday, September 29, in St. Paul's Episcopal Church at Des Moines. After a short wedding trip to Chicago, the young couple will be at home in Des Moines, where Dr. Kottke has been practicing medicine for five years.

The marriage of Miss Marian Brouillard of Charles City, and Dr. Paul O'Keefe of Waterloo, took place Wednesday, October 11, at Charles City. After a honeymoon which will take them to Chicago and St. Louis, Dr. and Mrs. O'Keefe will return to Waterloo, where Dr. O'Keefe has practiced medicine for the past four years.

Saturday, October 21, Miss Fayre Mae Smith of Des Moines, and Dr. Elmer A. Larsen of Centerville, were united in marriage at the Paul D. Hart home in Clinton. They will make their home in Centerville, where the bride has been dietician at St. Joseph's Hospital, and where Dr. Larsen has practiced medicine for some time.

DEATH NOTICES

Carpenter, William Edwin, of Tama, aged sixty-three, died September 27 after an illness of several months. He was graduated in 1895 from Rush Medical College, and at the time of his death was a member of the Tama County Medical Society.

Condon, Joseph Redmond, of Des Moines, aged fifty-two, died suddenly October 12. He was graduated in 1908 from the Northwestern University Medical School, and at the time of his death was a member of the Polk County Medical Society.

Kelleher, George Francis, of Postville, aged forty-six, died October 23 of injuries received in an automobile accident. He was graduated in 1911 from the University of Illinois College of Medicine, and at the time of his death was a member of the Allamakee County Medical Society.

Moore, Robert A., of Silver City, aged seventy-nine, died October 9 after an illness of several years' duration. He was graduated in 1881 from the College of Physicians and Surgeons, Keokuk, and had long been a member of the Mills County Medical Society.

Yenerich, Charles Otis, of Rockford, aged forty-five, died October 14 following a long illness. He was graduated in 1910 from the State University of Iowa College of Medicine, and at the time of his death was a member of the Floyd County Medical Society.

QUININE MONOPOLY OPPOSED

Data collected by the health section of the League of Nations from ninety-three governments, fix the minimum amount of quinine necessary for the yearly treatment of malarial cases at 1,172,180 kilograms a year. A small group of manufacturers control quinine production so completely that only 156,280 kilograms a year are made available for world consumption. To break this monopoly, the League is experimenting with cheaper substitutes. Included in this class are mixtures of cinchona alkaloids (quinetum and totaquina), synthetic products (plasmoquin and atebrin), or organometallic compounds, such as stovarsol.

STATE DEPARTMENT OF HEALTH

(Continued from page 624)

others lived on a farm adjacent to the dairy concerned. The dairyman, whose milk supply was incriminated distributed raw milk, although caps on the bottles were labeled "grade A pasteurized." The dairyman's wife gave a history of typhoid fever in childhood and an outbreak of the disease in 1918 was traced to this dairy. Although this woman is regarded as being a typhoid carrier, laboratory examinations of a number of specimens have thus far failed to demonstrate a carrier state.

A detailed report of the investigation was forwarded to the local Board of Health and Board of Supervisors, urging improvement in sanitary conditions and safeguarding of the milk supply. None of the milk sold in Corydon had been pasteurized.

DR. PARKER OF MONTANA VISITS IOWA

Dr. R. R. Parker, special expert of the United States Public Health Service, recently spent several days in Iowa on his return to Hamilton, Montana. Dr. Parker is an entomologist who has devoted the past eighteen years to the study of Rocky Mountain spotted fever. On October 9, at the meeting of the American Public Health Association in Indianapolis, Dr. Parker presented a paper on the subject "Rocky Mountain Spotted Rever—Epidemiology with Particular Reference to Distribution and Prevalence in the Western United States."

Since 1905 Rocky Mountain spotted fever has gradually increased in prevalence and distribution in this country. A possible case of this disease was reported in Iowa in 1931. During 1933 at least five cases occurred. Dr. Parker visited the various counties concerned, saw several of the patients following their recovery and obtained additional information from patients, their relatives and attending physicians.

Although the American dog tick is regarded as the means of transmission of the disease in sections of the United States outside the Rocky Mountain region, Dr. Parker's studies have led him to believe that the rabbit tick, which is widely distributed in nature, plays a chief part in the spread of the virus among animals.

PREVALENCE OF DISEASE

	Sept.'33	Aug.'33	Sept.'32	Most Cases Reported from
Diphtheria	51	30	31	Polk, Harrison
Scarlet Fever	125	47	84	Polk, Woodbury
Typhoid Fever	34	17	69	Wayne, Muscatine
Smallpox	0	3	11	
Measles	5	0	8	Lee
Whooping Cough	76	126	28	Scott, Boone
Cerebrospinal Meningitis	0	2	2	
Chickenpox	13	10	17	Woodbury
Mumps	8	18	11	Woodbury
Poliomyelitis	13	8	18	Pottawattamie, Polk
Epidemic Encephalitis	25			Adams, Woodbury
Tuberculosis	41	44	37	(For State)
Undulant Fever	10	15	15	Kossuth
Syphilis	144	218	210	(For State)
Gonorrhea	242	193	279	(For State)

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. HENRY B. YOUNG, Burlington
DR. TOM. B. THROCKMORTON, Des Moines
DR. FRANK M. FULLER, Keokuk
DR. WALTER L. BIERRING, Des Moines
DR. JOHN T. MCCLINTOCK, Iowa City

Pioneer Physicians as City Builders

FRANK M. FULLER, M.D., Keokuk

The Constitution-Democrat's Annual Supplement, published in September, 1851, contains a brief history of Keokuk, from which the following is abstracted:

Iowa has no city that is better known than Keokuk. From the earliest day to the present time it has always occupied a prominent place and its citizens have brought honor to the state.

The first white settlement on the site of Keokuk was made in 1820 by Samuel C. Muir, an army surgeon, who came from Warsaw, Illinois, then Fort Edwards. He lived in his new cabin, with his Indian wife and children, for a short time and then leased it to St. Louis parties and moved to Galena, at which place and in northern Missouri he engaged in the practice of his profession.

Dr. Muir being regarded as the founder of Keokuk, a brief sketch of him may be of interest. He was a native of Scotland, graduated at Edinburgh university, and soon afterward emigrated to the United States. Upon his arrival here he offered his services as surgeon to the government, which were accepted. He was sent to the frontier among the military posts, where he came in contact with the Indians. He soon fell in love with a beautiful Indian maiden, whom he married. Muir and his Indian wife lived happily together and had several children. He was accompanied by his family wherever his duties caused him to go, which was from post to post. While stationed at Fort Edwards the war department issued orders to the effect that all officers and attaches of the army should at once abandon and refuse to harbor any Indian women around military posts. Dr. Muir at once resigned his position in the army. Many flattering inducements were offered him to abandon his wife and children, but this he refused to do, and taking his family, to whom he was greatly devoted, he left the post. After several years' practice in the northern settlements he returned with his family to his cabin at Keokuk. He had been absent ten years, during which period quite a change had taken place, among others the American Fur company having established a trading post. Dr. Muir died of cholera in 1832 and not long after his wife and all his children but one followed him.

For many years there was no fixed name to distinguish this place. It was called "Puck-e-che-tuck," Foot of the Rapids, and other names. According to reliable authority the place at the Foot of the Rapids received its christening at a little Fourth of July celebration, in 1829, held by a few steamboat men whose craft was lying at the foot of what is now Main street. The meeting was presided over by Col. George Davenport, and during the festivities the name of Keokuk was given to the settlement in honor of the Indian chief, who had always been friendly to the white people. From that time it has borne this name.

About a dozen men in the employ of the American Fur company, together with those already mentioned, composed the population of Keokuk up to 1831. All of the fur company employees had Indian women for wives. In the spring of 1831 Isaac R. Campbell moved down from Nashville and identified himself by engaging in business with Dr. Muir. After the Black Hawk war settlements became more frequent and in a few years Keokuk became quite a village. In 1837 it was platted by Dr. Isaac Galland. The town of Galland, seven miles north of Keokuk, now only a hamlet, was named for him. Dr. Galland represented the New York Land company. The town of Keokuk was laid out by Mr. Brattle, an engineer, who came over from Fort Edwards.

The Medical Repository* 1800-1805

AN HISTORICAL REVIEW

R. N. LARIMER, M.D., Sioux City, Iowa

The former speakers have outlined some of the pioneer medical practices of our locality. About the time that Dr. Pierson asked me to read a paper at this meeting I was fortunate enough to have given to me, four volumes of the "Medical Repository," and from these I will attempt to outline some of the pioneer medical practices of the time which they represent, namely 1800.

The "Medical Repository," according to Garrison's History of Medicine, was the first medical

* Presented before Woodbury County Medical Society, September 26, 1933.

periodical of the United States. It was published from 1797 to 1824, and the volumes at hand were published from 1800 to 1805. The journal was edited by Samuel Latham Mitchill, a man who was educated at Edinburgh and who represented the best medical thought of the time. He apparently wrote voluminously, did much scientific work and in 1810 was one of a group of six who founded the College of Physicians and Surgeons in New York the same year that Yale Medical School was started. The journals were collections of original papers by Priestly, Darwin, Noah Webster, Rush, and other men in that period, whose names are now remembered for their scientific work, book reviews and medical current events.

There are many startling articles, but before reviewing them it will be of interest to describe in a general way the situation of medicine at that time. The year 1800 showed great activity in the medical profession. Yellow fever was pandemic in the United States from 1797 to 1805. Typhoid fever was common. In 1798 Jenner had published his results of vaccination with cow pox. Waterhouse at Harvard University was experimenting with vaccination in 1800 and his first reports are noted in these volumes. Digitalis had been mentioned by Withering fifteen years before, but physicians were afraid of its use and it was considered a specific for pulmonary tuberculosis rather than of particular value in heart disease. The lack of what we consider modern knowledge and facilities for practice was appalling. Bacteriology was unheard of; the thermometer was not used; Laennec and his stethoscope did not arrive for thirty years; percussion was still thirty years away; surgery was of the rough and ready type; chloroform was not used until 1831; ether was not used until forty-five years later, and Lister first came into prominence in 1867. It would seem that the list could be continued to include almost everything with which we now practice medicine, but one is astounded at the power of observation, the originality, imagination and the efforts of the men who wrote.

Some of the articles must be considered classical. The original description of hemophilia by Otto is given, and the original work on vaccination is recorded. No less than twenty articles were written by Joseph Priestly concerning his chemical experiments with oxygen and oxides. What must have been the first record in medical publications of the use of nitrous oxide as an anesthetic is included in these volumes. Rush's article on the relation of decayed teeth and disease was the first to develop our modern ideas of focal infection. One dissertation entitled, "An Essay on the Sick Headache," contains what might be taken to be a modern description of the disease. Rabies, lock-jaw, venereal diseases, osteomyelitis, and diseases attendant to pregnancy and complications of delivery, are described.

A review of various articles can develop the medical thought at the time regarding etiology of disease. It shows that they were painfully close to the contact theory of the spread of infective disease, but apparently they could not conceive of bacteria, as such, or the transmission through animal carriers. Let us consider the spread of yellow fever, about which there are forty original articles in a total of 175 articles in these four volumes. Two causes of the disease are mentioned: the first of these was well recognized and universally accepted and was the poisonous vapor which came from the swamps and regions—the miasms. The second was contact with the goods from infected ships which came into the ports. However, to show how only one step was necessary to reveal the true vector of infection, let me quote Benjamin Rush who noted the following facts in a long article entitled "Facts Intended to Prove Yellow Fever Not To Be Contagious." "Yellow fever appears in these climates and seasons of the year in which the weather is hot." "It is unknown where a connection is not perceptible between it and marshes, mill ponds, docks, gutters, sinks, unventilated ships and other sources of noxious air." "It is destroyed by long continued and heavy rains" and "is completely destroyed by frost." Of these meteorlogic phenomena, he says, "they must annihilate the disease by acting exclusively upon the atmosphere," very different "from smallpox and measles which are propagated by specific contagion." He, and others recognized that the disease did not spread from person to person and that a rough and ready type of antisepsis was necessary for protection. For these reasons geographic conditions were considered important. Accordingly, several articles are found which record the details of temperature, barometer readings and weather conditions in general.

Typhoid fever appeared but not in epidemic form as did yellow fever. Here, too, they were close to the true etiology as the following paragraph shows; "The temple of Cloacina stood within thirty feet of the house. Here numbers of votaries had daily worshipped that goddess for several years, and even without a vault. The temple standing upon a southern declivity, fronting the north, the sun spent his whole force upon a large mass of ordure, that emitted an odour fraught with death." "This gas is highly noxious, but may be destroyed by covering the cloaca with lime,

which neutralized the gas. I think it advisable, in the summer season, frequently to throw quantities of lime into every vault and place that emits putrid air."

The original report of the physician and two consultants who attended at the death of Washington is reproduced, and is so typical of the reports of the period as regarded treatment and the attitude of the medical man of the period to his patient, that I feel it is well worth reading.

The heroic treatment may have hastened rather than hindered the death of the General. Several things are noted in this description; the massive dose of calomel, ten grains; bleeding thirty ounces at a time; sweating; and the use of tartar emetic, show that the treatment "to bleed, purge, puke and sweat," at which the modern student now smiles, was truly used in earlier days. Yellow fever was similarly treated, but in addition one finds many references to "The Bark" or as some with literary style call it, "The Peruvian Bark."

One wonders how a well man could have stood what a sick man had to take. Difficult labors were treated by bleeding "until the woman fainted even in the recumbent position."

One feature of the treatment would appeal to modern physicians, namely the use of fermented cider, brandy, rum and other similar pleasant combinations. One article eighteen pages long describes in detail the production of these necessities and more than that, the argument which is now used by most zealous advocates was also used then, namely "personal liberty."

From these very general remarks concerning this pioneer periodical one could draw many philosophic conclusions. From these I will protect you, but one cannot help but pay some tribute to the medical men who have preceded us, and likewise one cannot face the future with such equanimity as one would desire. Our personal knowledge will probably not be as archaic as is the material presented by these papers but the expansion of our knowledge will probably make the present generation as useless as that of one hundred and thirty years ago would be today.

The History of Medicine in Lucas County

TOM MORFORD THROCKMORTON, A.M., M.D.,
Chariton

TOM BENTLEY THROCKMORTON, B.Sc., M.D.,
Des Moines

(Continued from last month)

PHYSICIANS NOW PRACTICING IN CHARITON

Dr. Chancey Lee Brittell

Dr. Chancey Lee Brittell was born in Maquoketa, Jackson County, Iowa, May 11, 1882. His parents were Franklin and Mary (Beggs) Brittell. Young Chancey attended the public schools and was graduated from the Maquoketa High School in 1902. He then began his academic studies in the Department of Liberal Arts of the Iowa State University, Iowa City, Iowa. At the end of the first year, Chancey Lee decided to study medicine. Accordingly he matriculated in the Medical Department of the University and from it he received his Doctor of Medicine degree in the class of 1907. Following his graduation, Dr. Brittell located at Lamoure, Lamoure County, North Dakota. He remained there until March, 1908, when he moved to La Junta, Otero County, Colorado. Here he unfortunately contracted typhoid fever. Following his convalescence from this disease, he returned to Iowa and located in Chariton in November, 1908. He was married to Miss Rose Landis, a daughter of Mr. and Mrs. Joseph Landis, who were pioneer settlers in Lucas. Dr. Brittell has served as county physician and coroner. During his twenty-five years of residence in Lucas County he has built up a fine practice.

Dr. Albert Lee Yocom, Jr.

Dr. Albert Lee Yocom, Jr., the oldest son of Dr. Albert Lee and Anna Bell (Short) Yocom, was born in Newbern, Marion County, Iowa, December 8, 1886. The family moved from Newbern to Chariton, in 1889. Young Albert attended the public schools and was graduated from the high school in the class of 1904. Following his graduation he attended the Chariton Commercial College, but the lure of the medical field became irresistible to him, and he matriculated in the Keokuk Medical College, College of Physicians and Surgeons, Keokuk, Iowa, in the fall of 1905. He attended that institution for three years and then went to Chicago where he finished his medical education, graduating from the University of Illi-

nois College of Medicine in the class of 1909. He returned immediately to his home town where for some years he was in partnership with his father. Several years ago he erected a fine brick hospital which is situated one block east of the northeast corner of the town square. The building is well equipped and is one of which its owner, as well as the citizens in general, may well be proud.

Dr. Yocom married Jennie Marie Curtis, a daughter of Mr. and Mrs. John H. Curtis, one of the old families of the community. Dr. and Mrs. Yocom have two children, Curtis Albert and Mary Elizabeth. The son is pursuing a course of study preparatory to entering some medical college.

Dr. Roy Clark Gutch

Dr. Roy Clark Gutch was born in Blakesburg, Wapello County, Iowa, in May, 1888. He is the son of Harry and Mina (Clark) Gutch. As a boy he attended the public schools at Lovilia in Monroe County. His medical education was obtained in Barnes Medical College, St. Louis, Missouri, from which institution he was graduated in June, 1910. The doctor served as an interne in the Centenary Hospital, in St. Louis; after which he located at Iconium, Appanoose County, Iowa. After three years of practice at Iconium, Dr. Gutch came to Chariton, where he has since resided. He purchased the Dr. John A. McKlveen residence and office, located one block south of the southwest corner of the town square. The doctor was married to Miss Ruth Chase, in Des Moines, August 7, 1917. They are the parents of a daughter, Elizabeth Chase.

Dr. Harry Dwight Jarvis

Dr. Harry Dwight Jarvis was born at Rose Hill, Mahaska County, Iowa, March 19, 1881. His parents are Bruce and Arabella (Jackson) Jarvis. After attending Penn College, at Oskaloosa, Iowa, for one year, he began the study of medicine at the University of Missouri School of Medicine, Columbus, Missouri, in 1902. In 1903 he returned to his native state and continued the pursuit of his medical education in the Medical Department of the Iowa State University, Iowa City, Iowa, and was graduated from it in the class of 1906. The doctor then began the practice of medicine in his boyhood town, Rose Hill, Iowa. Here he carried on his medical activities until 1917, when he moved to Des Moines, Iowa, where he remained for two years. From the Capital City, the doctor came to Chariton, in 1919, and has continued in active practice in the community since that time. Dr. Jarvis was married to Miss Margaret Smith, at Sigourney, Keokuk County, Iowa, in June, 1906. They are the parents of two sons, Fred Jackson and John Almer.

Dr. James Bryson Robb

Dr. James Bryson Robb was born in Murdoch, Warren County, Ohio, April 13, 1876. His father, Alexander Robb, was a native of Belfast, Ireland; his mother, Margaret Ann Spence, was a native of Ohio. When he was ten years of age, young James came to Mediapolis, Des Moines County, Iowa. Here he received his schooling and was graduated from the high school in the class of 1893. He then attended Parsons College at Fairfield, Iowa, where his scholastic endeavors were rewarded by that institution, conferring upon him the Bachelor of Science degree in 1898. He matriculated in Rush Medical College, Chicago, Illinois, and was graduated from that institution in the class of 1903. He was a charter member of the Alpha Omega Alpha honorary medical fraternity of Rush Medical College. It was the second chapter of that fraternity to be organized in this country. Following his graduation the young doctor pursued his medical studies in a more practical manner by serving as an interne in the Cook County Hospital, Chicago, for eighteen months. The doctor then came to Russell, Lucas County, Iowa, where he practiced medicine for over sixteen years. In the summer of 1922, he purchased the residence of Dr. Tom M. Throckmorton on South Main Street in Chariton, where he has continued to serve his patients, old and new. Dr. Robb was married to Miss Eleanor Masters of Rossville, Indiana, December 24, 1907. They have three children: Eleanor Masters, Alice Gertrude, and Edith Margaret.

Dr. Delmar Bryant Sollis

Dr. Delmar Bryant Sollis, born in Dubois, Washington County, Illinois, July 30, 1884, is the son of John and Amanda (Carter) Sollis. His early schooling was obtained in Anna, Illinois; his medical studies were carried on in Washington University School of Medicine, St. Louis, and in Ensworth Medical College, St. Joseph, Missouri, respectively. He received his Doctor of Medicine Degree from the latter institution in the class of 1912. Following his graduation he spent some time as an interne in the hospital connected with his Alma Mater; also in one of the state hospitals in Illinois. He then came to Iowa in 1914 and located in Taylor County. Here he was engaged in general practice until he entered the service of the government during the World War. After his discharge from the army in April, 1919, he spent some time in New York City where he received postgraduate instruction in the diseases of the eye, ear, nose and throat. He again pursued a similar course of study in the same city in 1921. The doctor then located in Lincoln, Ne-

braska, where he was connected with a clinic during the years 1922 and 1923. Leaving this field of endeavor, he returned to the state of his first love and began the practice of his specialty, eye, ear, nose and throat diseases, at Chariton, May 24, 1924. Dr. Sollis was united in marriage with Miss Cora Jane Mackey, at Vincennes, Indiana, January 14, 1912. They are the happy parents of three children; Carolyn, Delmara and Edwin.

Dr. Taylor Rice Jackson

Dr. Taylor Rice Jackson was born in Butlerville, Jennings County, Indiana, February 21, 1870. His father, John Henry Jackson, was a native of Kentucky; his mother, Elizabeth Grinstead, was of Pennsylvania Dutch extraction. At the age of seven years, young Taylor moved with the family to West Branch, Cedar County, Iowa. He received his early education in the public schools at Oskaloosa; and his academic studies were carried on in Penn College in that city. He received his medical diploma from the University of Illinois Medical College, Chicago, Illinois, in April, 1897. Not forgetting his adopted state, the young doctor returned to Iowa and opened an office at New Sharon, Mahaska County. Here he continued in practice for two years, when he moved to Hocking, in Monroe County. In 1909, Dr. Jackson once again changed his residence and joined the profession at Albia, where he carried on a successful practice for twelve years. He then spent a year in California; after which time he pursued a postgraduate course of study in dermatology, at Rush Medical College, Chicago. He then located in Des Moines, Iowa, where he remained for a year; but owing to ill health he was obliged to leave the city. He located at Chariton and became a member of the Lucas County Medical Society.

Dr. Jackson was married to Miss Mame Robb, at Des Moines, in December, 1897. One daughter, Bernice Louise, was born to this union. Two years after the death of his wife, the doctor was united in marriage to Miss Daisy Smith, of Middlebury, Vermont.

Dr. Scott Lazear Throckmorton

The last physician to locate in Chariton is Dr. Scott Lazear Throckmorton, the youngest son of Dr. Tom Morford and Mary Ann (Bentley) Throckmorton. He was born in that town June 23, 1894. He received his early education in the public schools of his boyhood town and was graduated from the high school in 1912. He then entered Simpson College at Indianola. His academic studies were interrupted by the World War. After his discharge from the service in August, 1919, he enrolled in Iowa State Teachers College at Cedar Falls. From this institution he received his bachelor's degree. He then matriculated in the Medical Department of the Iowa State University, at Iowa City, Iowa, and received his diploma in the class of 1924. Following his graduation, he served his interneship in the Iowa Lutheran Hospital at Des Moines, after which he located at Chariton, where he has since been engaged in the practice of medicine. He has served as county coroner, county physician, and city health officer, and is acting in these capacities at the present time. The doctor was married to Miss Alma Otho Harreld, of Hedrick, Iowa, in 1924. They have one daughter, Jean Lee.

PHYSICIANS WHO HAVE PRACTICED IN RUSSELL

The town of Russell is located in the northeast corner of Washington township, about eight miles east of Chariton. In 1866, the Burlington and Missouri River Railroad constructed its road across the township. Accordingly, on October 8, 1867, Mr. H. S. Russell platted the original town, which consisted of two hundred and nine lots. It was not long until the village began to thrive. This was due, in part, to the fact that the railroad missed the village of Lagrange, by a mile or so; hence it was but a matter of time until many of its inhabitants sought a new home in the railroad town. In time, Russell became a favorite trading center for the farmers, as well as a shipping place for stock. The junior writer recalls quite vividly the stirring days in the early nineties when Russell sought to wrest the county seat from Chariton. The torch-light parades and other demonstrative methods used by the vying populace made a vivid impression on his young mind. Only those persons who have witnessed a county seat contest are in a position to appreciate the heated rivalry and declamatory contests which take place on such an occasion.

There is nothing of definite record as to who was the first physician to locate in the town. It is claimed that a Dr. Sanderson was the first member of the profession to come to the new village. If this is true, we have no knowledge of the doctor, his qualifications, where he received his medical education, how long he remained in the town, or where he went after leaving the community.

Dr Theophilus Sprague

Dr. Theophilus Sprague was born at Hilum, Staffordshire, England, November 23, 1846, the son of James and Mary (Fulford) Sprague. He came to the United States with his parents in 1854. The family moved to Sheffield, Bureau County, Illinois, in 1857. Here, Theophilus spent his early life on his father's farm. When seventeen years of age, he enlisted in Company G, 66th Illinois Western Sharpshooters, and was in the battles of Snake Creek Gap, Calhoun Ferry, and Rome Crossroads. He also marched with Sherman's Army to the sea. After the close of the Civil War, the 66th Regiment proceeded by way of Richmond and Fairfax Court House, Virginia, to Washington, D. C., where it marched in grand review on May 24, 1865. He was mustered out of the service July 13, 1865, and at once returned to his home. Theophilus then took up the study of medicine under Dr. J. L. Morgan of Sheffield. He later matriculated in Rush Medical College, Chicago, Illinois, and was graduated from that institution in the class of 1870. Following his graduation, the young doctor came to Iowa and located in Russell, which at that time was a new town on the main line of what is now the Burlington railroad. He soon became acquainted with the people, made many friends, and succeeded in building up a good practice.



Theophilus Sprague, M.D.
1846-1922

Dr. Sprague was married to Miss Elizabeth Jones, at Sheffield, Illinois, in 1871. To this union nine children were born. Mrs. Sprague died August 20, 1896. In 1899, Dr. Sprague was married to Miss Martha Preston, a daughter of Mr. and Mrs. John Preston.

After eight years of successful practice in Russell, the doctor returned to his former home at Sheffield, Illinois. Here he practiced until the time of his death, September 21, 1922.

The following excerpt concerning the good doctor is taken from the Sheffield Times:

"In the death of Dr. Sprague this community lost its most beloved citizen and the county one of its most influential men. He is the last of the old time country doctors—those few grand old pioneers—whose service and sacrifice for suffering humanity can never be measured.

"Fifty golden years as a physician he gave to his fellow man—his youth, his prime, his old age and declining years—never refusing the call of the sick until his own decline compelled him to give up, two months before his death. During the forty years he practiced in Sheffield he was never known to refuse a sick call, night or day, early or late. No matter how severe the rain or blizzard, the doctor went his way. The old folks relate his coming to them over the prairies with his ponies in the by-gone days when there were no roads, but when swamps abounded. Equally hard were the trips he has made these later years in his trusty Ford automobile. The fall and winter of 1918, when the influenza raged, was doubtless the hardest time of his life. Only one with the rugged constitution of the pioneer could have endured the hardships he then encountered. He was not only a physician whose skill eased bodily pain, but more than that he was a devout Christian who respected all creeds, whose word of hope and faith soothed the passing soul and comforted the living. He is the last of the old country doctors whose charity could not be measured, whose loving sacrifice and service, a sorrowing community will cherish."

Thus we note the passing of the old time "country doctor.' The writer adds this excerpt because it describes so well the faithful country and family doctors of the past two generations.

(To be continued)

THE PHYSICIAN'S PRAYER

Without hauteur or the braggart's tongue, not with an assumption of superiority over others, but as students seeking the truth, and as men sobered by the part we play in the drama of life and death, conscious of our limitations, rejoicing in what we have achieved throughout the ages, grateful for the many discoveries of modern times, with a vision of what is yet to be, let us press forward to the work that lies before us in the long road to our dream of the diseaseless future!—Victor Robinson, M.D., "The Medicine Man."

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

DIET IN SINUS INFECTIONS AND COLDS—By Egon V. Ullmann, M.D.. formerly special lecturer for biology at the Oregon State College. Recipes and Menus by Elza Mez. The Macmillan Company, New York, 1933. Price, $2.00.

LIFE BEGINS AT FORTY—By Walter B. Pitkin, professor in journalism, Columbia University. McGraw-Hill Book Company, New York and London, 1932. Price, $1.50.

RECTAL DISEASES IN OFFICE PRACTICE—By Lawrence Goldbacher, M.D., chief of the Department of Proctology, Women's Homeopathic Hospital, Philadelphia. Illustrated with 176 half-tones and line engravings, some in colors. L. Aubrook & Company, 1933. Price, $9.75.

SURGICAL CLINICS OF NORTH AMERICA—Volume xiii, No. 4, Mayo Clinic Number, August, 1933. Per clinic year, February, 1933, to December, 1933. Octavo of 215 pages with 65 illustrations. W. B. Saunders Company, 1933. Price, paper, $12.00; cloth, $16.00.

MEDICAL CLINICS OF NORTH AMERICA—Volume xvii, No. 2, Chicago Number. Per clinic year, July, 1933, to May, 1934. Octavo of 233 pages with 36 illustrations. W. B. Saunders Company, Philadelphia and London, 1933. Price, paper, $12.00; cloth, $16.00.

BOOK REVIEWS

FETAL, NEWBORN, AND MATERNAL MORBIDITY AND MORTALITY

A publication of the White House Conference on Child Health and Protection. D. Appleton-Century Company, New York and London, 1933. Price, $3.00.

This volume includes twenty-two reports which analyze and discuss the different factors and causes of fetal, newborn and maternal morbidity and mortality. It is the result of the most thorough study, perhaps, of these subjects which has been made to date, and places a summary of our present statistical knowledge at the disposal of every physician in condensed and tabulated form. As a result of these studies the committee recommends the dissemination of information that abortions are responsible for a large portion of maternal mortality and that the procedure is one of grave danger. They further stress the importance of improving or replacing our present methods of reporting births and deaths so that accurate information for future statistical studies will be available.

An adequate reference list is furnished in connection with each of the various phases of the problem discussed.

FOOD, NUTRITION AND HEALTH

By E. V. McCollum, Ph.D., Sc.D., and J. Ernestine Becker, M.A., professor and associate professor of biochemistry, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Maryland. Third edition, rewritten. The Lord Baltimore Press, Baltimore, Maryland, Price, $1.50.

It is particularly fitting at this time that a physician, a scientist, and a teacher of highest authority should prepare a simple yet straightforward scientific discussion of the basic principles underlyng food use. This volume by Dr. McCollum should be welcomed by every physician as a very distinct contribution to the popular knowledge regarding this important subject which is now much preyed upon by promoters, faddists and medical quacks.

In this book the author presents the established facts regarding the vitamins, the dietary habits and requirements of man, the reducing and increasing diet, and the diet useful in certain pathologic states. Because of its high authority the book may be safely recommended to patients.

HEALTH AND ENVIRONMENT

By Edgar Sydenstricker, chief statistician, United States Public Health Service; Director of Research, Milbank Memorial Fund. McGraw-Hill Book Company, New York and London, 1933. Price, $2.50.

This report is one of a series of monographs published under the direction of the President's Research Committee on Social Trends, embodying scientific information assembled for the use of the Committee in the preparation of its final report entitled Recent Social Trends in the United States.

In this monograph the problems of health and environment have been studied, particularly in reference to their appropriate place in the main scheme of social trends in the United States. The author discusses the nature and extent of ill health, compares the urban and rural differences in the incidence of disease, evaluates the factor of the economic status as related to the problem, discusses the part played by social and occupational environment, and concludes his monograph by a chapter dealing with his summary of the factual evidence and states the conclusions which he has drawn from the study.

The chapter upon the trend of mortality is particularly interesting. While fully appreciating serious limitations which handicap the use of comparative mortality statistics, he presents well authenticated records of mortality investigations, and carefully weighs such statistical evidence insofar as it presents a bearing upon the general trend of mortality.

In his conclusion he states "It is impossible, in the

opinion of the writer, to draw broad scientific conclusions as to the trend of vitality and the health of the American people."

THE HISTORY AND EPIDEMIOLOGY OF SYPHILIS

By William Allen Pusey, A.M., M.D., LL.D., Emeritus Professor of Dermatology, University of Illinois. Charles C. Thomas Publishing Company, Springfield, Illinois, and Baltimore, Maryland, 1933. Price, $2.00.

This volume contains a series of lectures prepared by this eminent author and teacher supplemented by a series of biographic sketches of those pioneers in syphilography who contributed so largely to our present knowledge of this universal scourge. The author apparently assumes that the American origin of the disease has been established beyond controversy and begins his discussions with the pandemics of 1496 and 1498. In the closing portion of his discussion on epidemiology, the author reveals in chronologic order the most recent discoveries bearing upon the personal and sanitary problems of this disease. The terse and intimate biographies are perhaps the most delightful part of the book although the author's literary style lends fascination to every portion of the volume.

The book is handsomely illustrated by well chosen photographs, many apparently taken from the author's personal collection.

INTERNATIONAL CLINICS

Volume III, Forty-third series, edited by Louis Hamman, M.D., visiting physician, Johns Hopkins Hospital, Baltimore, Maryland. J. B. Lippincott Company, Philadelphia, Montreal and London, 1933. Price, $3.00.

This volume of the quarterly International Clinics presents a symposium upon diseases of the parathyroid glands written by four outstanding national authorities from their respective fields. Due to the important advances which have been made in the study of parathyroid functions it is particularly timely that this symposium and summary should be offered to physicians.

Outstanding in the sections devoted to medical clinics are those dealing with agranulocytic angina and allied conditions, infectious mononucleosis, and pellagra. Each of these subjects are treated rather fully and the information brought entirely up to date. A clinic entitled "The Treatment of Diabetes Mellitus" will be of practical value to every physician treating this type of patient since the author confines his discussion entirely to the practical phases of management in the average diabetic case.

In the section devoted to ophthalmology and otolaryngology, particular attention is directed to a review of the literature concerning detachment of the retina and its treatment.

The volume is illustrated.

A TEXTBOOK ON NEUROPATHOLOGY

By Arthur Weil, M.D., associate professor of neuropathology, Northwestern University Medical School, Chicago. Illustrated with 260 engravings. Lea & Febiger, Philadelphia, 1933. Price, $5.00 net.

This excellent volume demonstrates the importance of a separate study of the pathology of the nervous system. In a concise, complete, and comprehensive manner the author presents the subject with full appreciation of the clinical viewpoint. The volume provides a review of the subject covering every recent advance; it summarizes the facts heretofore scattered throughout the literature; it gives a better understanding of the reaction of the nervous system in disease; and it is a reliable guide in all clinical work.

The illustrations are of especial value since they are engravings made from actual photographs. This work is a very definite and outstanding contribution to the field of neuropathology which will be appreciated by the student, the pathologist and the clinician.

OBSTETRICS AND GYNECOLOGY

Volume III and Index

By eighty leading specialists. Edited by Arthur Hale Curtis, M.D., professor and head of the department of obstetrics and gynecology, Northwestern University Medical School. Complete in three volumes and separate desk index, 3500 pages with 1664 illustrations, many in colors. W. B. Saunders Company, Philadelphia and London, 1933. Price, per set, $35.00.

The third volume of this encyclopedic treatise on obstetrics and gynecology brings to a culmination the most complete and most authoritative reference work on this subject which has appeared in the English language. Its scope includes every practical phase of both medical and surgical gynecology, and normal and operative obstetrics. Each section is written by a recognized authority and presents not only up to date information on the subject, but methods which have been tried and proved useful in the hands of competent observers.

Accompanying the three volume set is an index volume which provides direct and cross references to the several thousand subjects treated in the three volumes. Thorough cross indexing eliminates tedious search for section or paragraph titles. Volume III is devoted essentially to gynecology, including displacements and relaxations of the organs of the female pelvis, together with disturbances of function resulting from deficiency or deranged endocrines, special diseases, or rare complications.

The specialist in this particular field will immediately recognize the outstanding quality and thoroughness of this work and will wish to study it from beginning to end. The volume is favorably commended to the attention of the general practitioner as a convenient and authoritative reference guide to his practice in these fields

DISEASES OF THE CHEST AND THE PRINCIPLES OF PHYSICAL DIAGNOSIS

By George W. Norris, M.D., formerly professor of clinical medicine in the University of Pennsylvania; and Henry R. M. Landis, M.D., professor of clinical medicine, University of Pennsylvania, with a chapter on the transmission of sounds through the chest by Charles M. Montgomery, M.D., formerly physician to the Phipps Institute, Philadelphia, and a chapter on the electrocardiograph in heart disease by Edward B. Krumbhaar, M.D., professor of pathology, University of Pennsylvania. Fifth edition, revised, 997 pages with 478 illustrations. W. B. Saunders Company, Philadelphia and London, 1933. Price, $10.00.

The first edition of this well established treatise upon diseases of the chest appeared fifteen years ago. Since that time it has gone through five separate editions and has been reprinted a number of times. These facts bespeak the popularity of this work.

The fifth edition includes new material necessitated by the advance of our knowledge in this particular field. The section on bronchoscopy has been added. Following the original plan of the text the physical methods and signs of diagnosis have been stressed, although laboratory methods of diagnosis are adequately discussed. The book has been written primarily for the use of the clinician, and for this reason every discussion is based upon its practical use at the bedside.

Abstract theory and academic discussion are considered extraneous and omitted from the text. Well chosen diagrams and photographic reproductions of tissue specimens and x-ray plates are generously used throughout the text.

The volume is easily the most outstanding treatise upon diseases of the chest and physical diagnosis of this region which has come to our attention. It is heartily recommended to every physician.

A PHYSICIAN'S TOUR IN SOVIET RUSSIA

By Sir James Purves-Stewart, K.C.M.G., C.B., F.R.C.P., consulting physician to the Westminster Hospital, London. Frederick A. Stokes Company, New York, 1933. Price, $1.15.

This short volume contains an unprejudiced account of observations made by the author, a practicing physician, who visited Russia during the summer months of 1932.

After a fairly comprehensive survey of communistic principles, the author relates his experiences from the time the party left London, on board a Soviet merchant ship, until they arrived at the journey's end in Poland. During the trip, the party visited Leningrad and Moscow, traveled down the Volga to Stalingrad, thence by rail to Rostoff, to Kharkoff, to Kieff, in which the Fourth Psycho-Neurological Institute is located, finally crossing the Russo-Polish frontier at Warsaw. Hospitals, prophylactoria, forest schools, night sanatoria, medical schools and prisons are described, as well as living conditions in general. The author concludes by pointing out that Russia is neither the heaven of which communists shout so loudly, nor the hell painted by the capitalistic press. Rather it is a purgatory of gloomy drab uniformity, where free speech is strictly repressed, and where there is conspicuous absence of adequate stimulus or reward for thrifty or ambitious citizens.

The volume is well written, and interesting facts are presented in a pleasing manner. For those who wish to become acquainted with conditions in this little understood nation, this short work is unreservedly recommended.

100,000,000 GUINEA PIGS

Dangers in Everyday Foods, Drugs and Cosmetics, by Arthur Kallet of Consumers' Research, Inc., and F. J. Schlink, of Consumers' Research, Inc. The Vanguard Press, New York, 1933. Price, $2.00.

As implied by the title the authors of this sensational but apparently authoritative book refer to the unscrupulous experimentation conducted by members of the food and drug industry upon the American people. The authors have not written in terms of generality but cite many well known and nationally advertised foods and drugs, pointing out their injurious effects when used for the purpose for which they are sold.

No small part of this book's importance lies in the fact that it outlines remedies for the evils which it discloses. The authors of this work are particularly fitted by previous scientific study and research for this writing, and they have apparently drawn freely upon the files and research facilities of the Consumers' Research, Inc., of which they are each officers. That the National Food and Drug Act should be roundly criticized is entirely in keeping with the findings of these authors, but it must be said for them that they have searched federal, state and municipal laws faithfully before advancing their criticisms.

Since the American public has been deluged in a flood of advertising during the past few years, both through the printed page and over the radio, and since this advertising has so largely taken the form of scientific or medical sponsorship of the product advertised, it is most valuable that at this time a book of the scope and character of "100,000,000 Guinea Pigs" should be presented to the American people.

The book has been written for the laity, but there are dozens of items which will prove of tremendous importance to every physician. The fascinating narrative style of writing employed by the authors divests the subject of its tedium and renders the perusal of this volume a pleasant and profitable excursion into the fields of modern quackery.

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SURGICAL CLINICS*

H. M. RICHTER, M. D., Chicago

FIRST DAY
THYROTOXICOSIS

We have several patients this morning representing diseases of the thyroid gland. We are inclined to regard all of the various thyroid enlargements as goiters, but I wish to bring out the point that we should classify the diseases of the thyroid gland into various categories. Goiter forms an important group, but I will point out to you that there are other changes which do not consist in goiter.

The first patients are two adolescent brothers, born in this neighborhood, of native American parents. Both have fairly large, soft, irregular goiters. We do not know at what age these goiters appeared. Apparently it was early, before puberty, and they have slowly grown to their present size. It is probable that early examination would have revealed more diffuse types of goiter, with the development of the nodules in the course of their growth. The boys are clinically well. They came under observation because of the tumors, not because of any symptoms connected with the tumors. Their pulse rate is normal, they are not clinically toxic, they are not nervous, nor have they lost weight. Their basal metabolic rate is in all likelihood, also normal.

These goiters are not in themselves a source of illness. They are the result of an iodine deficiency. We require but an infinitesimal amount of iodine in our food, but in great areas of the world that small amount is lacking. The organism requires this small quantity, and in the absence of a sufficient amount, the thyroid gland undergoes a sort of hypertrophy. A general diffuse enlargement of the gland takes place in childhood, especially noticeable toward the age of puberty. With advancing years such nodules as these boys present can be palpated in the depth of the mass, and toward middle life become increasingly prominent. They have usually been regarded as true tumors, and called adenomas. Some, particularly the single nodules, are probably true adenomas. Reinhoff of Baltimore has maintained, and I believe on satisfactory grounds, that most of these multiple nodules result from changing periods of activity of the gland.

In old goiter districts of Europe these nodular goiters are seen frequently, even in the young, but as I have stated, our endemic goiter is usually of the diffuse variety, becoming nodular with advancing years.

Endemic goiter is commonly thought of as being symptomless. It is not in any way related with thyrotoxicosis. However, there may be a very obvious degree of hypothyroidism in some cases. Among agricultural animals goiter is known to be associated with poor development, infertility and the premature dropping of the fetus. I think that the study of children in goiter communities would show more evidence of hypothyroidism than we appreciate. Endemic goiter is a preventable disease. Iodine is now used throughout the world, yet it seems to me that it is not wisely used in many communities.

I wish to suggest that every pregnant woman in goiter communities should receive minimal amounts of iodine throughout pregnancy. Iodized salt is probably sufficient. When using iodine in the form of Lugol's solution, it is so easy to give too large doses. One or at most two drops of Lugol's solution a week, not a day, is ample. Children of preschool and of school age, and adolescents, should receive approximately the same dose; never more. I would also like to suggest that obstetricians and pediatricians particularly have an obligation to their patients and to the community to preach the prophylactic use of iodine.

These boys do not present surgical indications. They should receive small doses of iodine, with probably some desiccated thyroid extract daily. The goiters may subside somewhat; they will not disappear.

Nodular goiters in adults present a somewhat

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more disturbing problem. When they give rise to definite pressure symptoms they should be removed, and the same may be said if they are so large as to be disfiguring. Some very competent clinicians believe they should be removed because they are sources of danger. A certain number become toxic, and it is known that carcinoma is particularly prone to appear in such a nodule rather than in the gland proper. It is a known fact that approximately two per cent of all nodular goiters, which have been removed, are found to be carcinomatous.

Against the advice for an operation to prevent later toxic manifestations I wish to urge that the incidence of such a development is not great enough to justify the operation as a prophylactic measure. It is much better, I think, to remove those goiters which become toxic. Your patient should be adequately instructed so that she will not unduly delay the operation if she becomes toxic.

The figures given for carcinoma will bear scrutiny. Simple nodular goiters give rise to no symptoms. Only one such patient in a thousand consults a physician. The real incidence of carcinoma would therefore be one one-thousandth of two per cent, or one carcinoma to fifty thousand persons having nodular goiters, a percentage altogether too small to justify routine prophylactic operations of such magnitude.

The next patient is a young woman, the mother of two children. She has noticed a gradually developing nervousness over a period of some years. Several years ago a physician removed a nodule from her neck because of this nervousness, and without effect upon her. She is irritable, excitable; she is tempermentally changed; she is easily depressed and cries without cause. She is conscious of her heart beating, and of the fact that the pulse is rapid. She is weak, tires easily, so that she cannot carry on; noises startle her, so that she is jumpy and jerky; she has lost weight in spite of a marvelously good appetite, and she sleeps well.

Examination of this patient discloses a small, actively excited woman, thin and drawn. There is an obvious tremor of her body and well marked tremor of the fingers. Her heart is rapid and would probably show a fairly high pulse pressure. The eyes show little change although there may be a slight lid lag. There is little if any widening of the palpabral fissures, no obvious exophthalmos and a questionable stariness. There is a scar on the neck marking the site of a previous operation. A small mass of thyroid tissue can be noticed low in the left side of the neck, none on the right side. It is firm and smooth. Laboratory studies have been entirely negative except that she has a basal metabolic rate of approximately plus fifty.

This patient presents a typical picture of what we may call thyrotoxicosis, hyperthyroidism, or exophthalmic goiter. I think the term thyrotoxicosis is best, for it indicates merely an intoxication, of thyroid origin. The term hyperthyroidism indicates the nature of the disease, an increased secretion. I think the term is correct, although some believe the secretion is altered rather than increased. The term exophthalmic goiter is incorrect, and was originated before research workers realized that both exophthalmos and goiter are late results, and not essential elements.

Thyrotoxicosis is a toxemia dependent on a pathologic thyroid gland. The essential feature of the gland is a hyperplastic change, although I am aware that much more than this should be said of the changes in the gland. What I wish particularly to emphasize, however, is this; thyrotoxicosis is not "goiter," and is not in any way related to the condition which is demonstrated in the two boys. In this woman the gland will show a markedly hyperplastic state. If this woman had had an ordinary endemic goiter before the development of her thyrotoxicosis, she would naturally have shown the anatomic changes peculiar to goiter, but she would also show the hyperplastic changes in the gland. If she had had a nodular goiter similar to that of the boys, she would have shown the characteristic hyperplastic changes in the gland outside of the nodules, and if the nodules were not too greatly degenerated, she might easily have shown similar changes within the nodules. The previously existing goiter, whether smooth or nodular, does not prevent thyrotoxicosis; and I do not believe it causes thyrotoxicosis. Since endemic goiter is rather common in my district, the Great Lakes district, we see a considerable number of goiter patients with thyrotoxicosis. Since nodules develop more commonly in older people, we have a larger incidence of thyrotoxicosis with nodular goiter in older people than in the young.

Thyrotoxicosis seems to be able to produce exophthalmos in the young much more easily than in the old. For obvious reasons therefore, young people with thyrotoxicosis usually have smooth thyroid glands and exophthalmos, while older people, as a rule, have nodular goiters without exophthalmos. Both have the same disease, thyrotoxicosis.

The treatment of this patient presents a few practical problems. We must reduce her thyroid

activity. We can do that to some extent by various means. Bed rest, sedatives, and relief from the stress and strain of life, are of some value in lessening thyroid activity. They are of little practical value. With the exception of iodine, the various forms of medication in common use are also of little value. Iodine has a peculiar value. It commonly produces a profound effect which lasts from several weeks to as many months. It is an almost universal experience that its action is not lasting. I think there is no precise time at which it ceases to act, but ultimately the old symptoms return, and are only measurably controlled by iodine.

Radiotherapy is very effective in some cases. The literature on radiotherapy is not convincing to me. The incidence of lasting effect is too low and I think that its practical value today does not equal its theoretical possibilities.

We can reduce thyroid activity by adequate surgical removal of the thyroid gland. By adequate removal I mean the removal of all but just enough thyroid tissue to maintain a normal basal metabolism. Only two or three grams of thyroid tissue are required for this purpose. A timid inadequate operation may fail by leaving enough thyroid tissue behind to maintain the toxic state. This patient presents an example of such work. Surgical failures are commonly of that character. This patient should be treated as though no earlier operation had been performed; she should now have a thorough thyroidectomy. As preparatory treatment she should receive iodine for two or three weeks. I prefer fairly large doses, given in the form of Lugol's solution, usually ten to fifteen drops in six to eight ounces of milk with meals. Some men prefer smaller doses.

SECOND DAY

METASTATIC CARCINOMA OF THE LIVER

The first patient is a man along in years who presents a large upper abdominal tumor. I am told that the tumor was first recognized some six months ago, and has grown considerably since that time. Few prominent symptoms have been present. There has been increasing weakness, weight loss which now amounts to thirty-five pounds, what the patient speaks of as some indigestion, by which he indicates loss of appetite, some distress and some belching after eating. There has been no material pain. There is no story of vomiting, diarrhea or constipation; no urinary disturbance; he is not aware of having been feverish, and his temperature now is normal. He is said to have had a mild temporary jaundice earlier in his illness, but was not seen at that time by a physician.

Examination reveals a rather sallow, but not distinctly jaundiced old man, somewhat emaciated, obviously very weak. Aside from the abdomen, he presents no conspicuous objective findings. The light here is not good enough to pass on the presence of jaundice. A rectal examination, digital, has been made, and will not be repeated. The prostate is said to be enlarged and firm, not definitely nodular. There are no enlarged lymph nodes in the groin, or above or behind the inner end of the left clavicle.

Examination of this man should include a complete inspection of his entire body; but I am sure you will agree with me that it would be unwise to expose him too much in this room. It is a fact, however, that such a presentation is pedagogically as well as clinically faulty. I am fearful of the effect upon an audience of presenting so incomplete a method of examination. The incompleteness of a teaching method is not compensated for by an explanation that under the circumstances we cannot do better; I can only apologize and say that an adequate examination of a patient should be made in a room so lighted that one can recognize the color of a jaundice, or of the skin of a patient with pernicious anemia; so warm that the patient may be stripped; on a table so soft and comfortable that complete relaxation of the patient can be obtained. We will have to assume that all this has been carried out before bringing the patient before you.

With the abdomen of the patient exposed as well as possible, you will observe that the upper abdomen is greatly distended while the lower abdomen is comparatively normal. Palpation reveals a firm resisting, generally smooth mass occupying the entire upper abdomen, larger on the right side, apparently actually raising the costal arches, perhaps particularly the right arch. It extends well below the level of the umbilicus on the right and around to the lumbar area; forward across the abdomen to be lost under the left arch. It is not movable but moves with respiration; it seems somewhat elastic; its smoothness is interrupted by large rounded knobs, also smooth. The spleen cannot be palpated. The lower abdomen presents some gaseous distension, but otherwise is negative to examination.

Radiologic studies show the stomach to be pushed well down and over to the left. No intrinsic lesion was found. Blood studies were negative except for a secondary anemia. The urinary findings were negative. There has been no increased blood bilirubin, nor urinary bile.

The outline and position of the tumor mass, and its movement with respiration, immediately indicated it to be the liver. One must, of course, ex-

clude all other possible large tumors. A large retroperitoneal tumor such as a lipoma might easily be difficult to exclude, as it may occupy any position in the abdomen. It would be more likely to lie behind the stomach and bowel, and would not depress them as the roentgenogram of this tumor shows it to do. If the tumor were not of a malignant nature, there would be no such weight loss. Right-sided kidney would be excluded by its shape and position and by the direction of its long axis which would be more decidedly longitudinal and would not extend over to the left in the direction of this tumor. Radiologic findings would easily exclude it.

It is less difficult to exclude these other tumors than to determine which of the hepatic enlargements we have here.

The large liver of biliary cirrhosis occurs in younger patients, is of much longer duration, and is associated with more or less intermittent jaundice. It is not a comparatively rapid disease with a progressively downward course.

Echinococcus cyst may reach this size, but requires years for its development. The outline is smoother, and a characteristic percussion wave may usually be demonstrated when it reaches this size. Its growth is unassociated with any great interference with normal health.

The large amebic abscess usually gives the clinical picture of chronic infection with some temperature elevation and leukocytosis, although these may be lacking. The liver outline is usually that of a more distinctly localized mass than is presented here.

In this case, the knobs on the surface of the liver, with the rapidly downward progress of the disease, and the whole picture of cachexia, suggest a malignancy, and a metastatic malignancy. We have not found the original lesion. The outline of the prostate is only suggestive. A small carcinoma may be present in the pancreas without compromising the common duct, or anywhere in the colon without bowel symptoms. Carcinoma of the ascending colon is notoriously likely to give rise to few local symptoms until advanced. Anemia may be the earliest evidence, and liver metastases are not uncommon.

Carcinoma of the rectum must always be considered early in such a case as this. It is one of the frequent sources of liver metastases. Digital examinations have been made; radiologic studies have been made; proctoscopic studies should be made.

I would regard this case as a metastatic carcinoma of the liver, of unknown origin.

APPENDICITIS—ITS INCREASING MORTALITY*

GEORGE M. CRABB, M.D., F.A.C.S., Mason City

A disease that is responsible for twenty-five thousand preventable deaths each year deserves our serious consideration. Despite the fact that from 300 to 500 articles on this important subject have appeared each year in our medical journals, the death rate for appendicitis has increased 14 to 18 per cent during the last fifteen years. I am more and more convinced that deaths from appendicitis are preventable, but I am equally convinced that writing more papers on the subject will not help to reduce the death rate. I believe that our educational plan for the dissemination of knowledge concerning this disease must reach a much larger group of doctors and laymen than is reached by our medical publications. In this brief paper I shall propose some steps which I believe can be carried out in this state that will materially reduce the mortality rate from appendicitis.

The statistical division of the New York Life Insurance Company in comparing figures for 1911 to 1915, with similar tabulations for 1925 to 1929, states that deaths of white males from appendicitis have increased 20 per cent in this short period and deaths of white females have increased nearly 14 per cent. They do not believe that this is only an apparent increase due to better diagnosis, since the diagnosis and treatment of appendicitis was quite as well known in 1911 as it is today. The important fact to a life insurance statistician is that more people are dying from appendicitis today than there were twenty years ago. This fact is a challenge to the medical profession. In my review of the many articles on this subject, I found that many competent surgeons do not accept the statement of insurance statisticians to the effect that the mortality of appendicitis is definitely increasing. Dr. Irving Walker of Boston in a recent article questions whether or not there is an actual increase in the operative mortality rate.

If one analyzes the literature carefully, it will be found that the mortality rate has increased per hundred thousand approximately 20 to 30 per cent over a fifteen year period. To quote Willis: "During the same period of time, the mortality in the treatment of gastroduodenal ulcer has risen 72 per cent, that of gallbladder disease has risen 77 per cent; and that of thyroid disease, 250 per cent. This is easily explained from the fact that surgery for the above named conditions, and I believe the same applies to appendicitis, may have

* Presented before the Eighty-second Annual Session, Iowa State Medical Society, Des Moines, May 10, 11, 12, 1933.

increased theoretically at least in the same proportion." Bear in mind that these mortality figures are based upon the mortality per one hundred thousand and not upon the incidence of the disease or the operation. It is not possible to determine from the literature the exact incidence of appendicitis for any one period. This being so, it is equally impossible for anyone to determine the mortality based upon this incidence. Dr. Walker feels that we should lay more stress upon the mortality based on the incidence of the disease than upon the mortality derived from vital statistics. He has taken the period from 1907 to 1910 inclusive and compared that with the period from 1927 to 1930 inclusive. Taking his figure for acute appendicitis only, he states that the incidence of the disease has increased 300 per cent during these twenty years and that the mortality for the period of time has dropped from 13.1 per cent for the first period to 5.8 per cent for the second period. He points out that this percentage of 5.8 per cent for acute appendicitis alone corresponds very nearly with statistics gathered from many writers for acute appendicitis at this time. It is his conclusion that while the mortality of appendicitis based upon the number of deaths per one hundred thousand has risen, the incidence of operation for appendicitis has markedly increased but with a lower mortality rate based upon that incidence.

I have no desire to enter into any controversy as to whether or not the mortality of appendicitis is increasing, but the fact remains that more people are dying from appendicitis now per one hundred thousand of the population than there were ten years ago, and this fact alone is a challenge to the medical profession to reduce their mortality rate and improve their technic in the handling of this dangerous disease.

Many factors contribute to an increasing mortality. When we attempt to analyze the conditions that are responsible for the deaths in the case of appendicitis, we find that the patient has been treated by three different groups of individuals.

1. *His Family.* He has received treatment at home in the form of purgatives and home remedies of various kinds. In the average home, the first thing thought of when someone complains of abdominal pain is castor oil or epsom salts. Some neighbors come in giving suggestions freely, telling how someone they knew died following an operation for appendicitis, all of which contributes to more delay. 2. *The Family Doctor.* Then the home physician comes into the picture and if he is alive to his responsibilities he at once recognizes a serious situation. He does not hesitate to act and gets his patient to a hospital for thorough study and operation. I am sorry to say that occasionally a case comes to my attention in which the local physician has been equally negligent in the treatment of this case and has not only delayed in making a decision but has been responsible for giving purgatives, not only epsom salts, but even croton oil. 3. *The Surgeon.* Following these two forms of treatment, the patient finally comes to the attention of a surgeon who is also at times guilty of delay when immediate operation should be decided upon. I am sure that at no time does the surgeon face so grave a responsibility as when he is presented with a case of abdominal pain that demands immediate diagnosis and sound judgment as to the method of procedure in that particular case. Delay or an incorrect diagnosis may mean spreading peritonitis and death. Better remove ten normal appendices than allow one to rupture and result in death.

Lord Moynihan of Leeds, England, is responsible for the statement that he has never seen perforation of the appendix that was not provoked by purgation, and that if cathartics were never given there would be few if any deaths from this disease. This is indeed a strong statement but demands our serious consideration when made by a surgeon of Lord Moynihan's experience. The exact influence of laxatives on the mortality rate is not easy to determine. Bowen of Philadelphia states that of those patients with acute appendicitis who gave a positive history of not having had a laxative, one out of eighty died; of those who had received one laxative, one in fourteen died; and in those who had received more than one laxative, one in seven died. Of all the laxatives that are used castor oil is perhaps the greatest offender because you are all familiar with its explosive action and can easily imagine how the pressure within the intestine is increased after its use. The violent peristalsis must greatly increase the intestinal pressure to such an extent that if the wall of the appendix is diseased and becoming gangrenous, it could very easily be ruptured by this increase in pressure. Personally, I can see no use for castor oil as a cathartic, either for adults or children.

Second in importance to purgation, in increasing the mortality rate, I would mention delay in getting the patient to the hospital where a complete study can be made. There are many factors that are responsible for this delay. The first one is the fallacious idea held by the laity that abdominal pain is a result of indiscretion in diet. I have very serious doubts as to whether or not any of the ordinary foods will ever cause an acute sudden

onset of pain such as we have in 95 per cent of acute appendicitis cases.

I believe that both the laity and medical profession are too prone to consider abdominal pain lightly. Abdominal pain lasting more than two hours is generally indicative of a surgical condition. Certainly abdominal pain that is accompanied by either nausea or vomiting demands immediate investigation. It is true that there are many conditions besides appendicitis that will cause abdominal pain, but if a careful history is taken, all other conditions are easily ruled out. If all cases of abdominal pain were thoroughly investigated and quickly treated, the death rate from appendicitis would be materially reduced.

Another reason for the laity delaying and fearing to send their relatives to the hospital is the newspaper publicity that has been given to deaths in hospitals. For several years I have taken occasion to study accounts of surgical deaths in hospitals and invariably all newspapers will state that the patient died following an operation. Dr. Fred Bailey of St. Louis, in a recent article, after emphasizing the harmful effects of laxatives, states that to this may be added the inherited fear of hospitals and of the doctors who believe in operating. Newspapers, although totally uninformed as to circumstances, complications or physical state of the subject, are prone to feature in broad headlines all deaths that occur following operations in such a manner that the laity condemns the operation, and not the delay or the lowered vitality of the patient for the failure. Because of the fear thus engendered, surgery is to them the last resort and is strenuously avoided. From the viewpoint of a layman, we would draw the same conclusion.

All writers are definitely agreed that if appendicitis cases were operated upon during the first six to twelve hours the mortality rate in the hands of any surgeon would be reduced to a point not to exceed one per cent. This fact alone lays a heavy burden upon the laity in that they do not call the doctor soon enough. Corroborative of this statement, I would cite records from the United States Naval Hospital, and also from the university hospitals of Michigan, Missouri and Pennsylvania, where the sailors and the students are closely supervised and urged to seek medical advice immediately, when abdominal pain appears. The mortality rate from these hospitals are far below the average for the general hospitals throughout the country, and this fact alone is convincing evidence that where people seek medical attention early, many lives are saved. At the University Hospital of Michigan the mortality rate for appendicitis among the students is 1.5 per cent while the rate for other groups of patients is 3.8 per cent. A comparison of these figures constitutes a striking example of what careful management will do.

Professor P. D. Wilkie of Edinburgh has recently stressed a pathologic classification of appendicitis that is very important. He states that there are two types: a true appendicitis with inflammation of the appendix wall which has a definite symptomatology that is quite different from the second type which he labels acute obstructive appendicitis. He tells us that Dr. Van Swalenburg of California, twenty years ago, pointed out this pathologic difference, but that no one paid any attention to it. Professor Wilkie now states that he believes 90 per cent of the fatal cases of appendicitis fall into the second classification. In the first class, that is, true appendicitis with inflammation of the wall, the symptoms are typical; pain in the epigastrium, later shifting to the right iliac fossa, with an increase of pulse and temperature, and vomiting. After the pain shifts to the right lower quadrant, there is definite tenderness and rigidity. This type of appendicitis is easily diagnosed and seldom overlooked. The second type, that is, the acute obstructive appendix, he believes has a different symptomatology and is characterized by a sudden onset with spasms of pain in the region of the appendix and vomiting, but with no initial rise of pulse or temperature.

The Lahey Clinic of Boston has accepted Professor Wilkie's classification and physicians there have made observations over a five year period, during which time 434 patients with acute appendicitis were operated upon. Nine of these patients died, making a mortality rate of plus two per cent. Eight of these patients had a definite obstructive appendicitis and it was obvious that 90 per cent of their mortality was traced directly to this particular lesion. It is the belief of those working in the Lahey Clinic that a great majority of fatal cases of appendicitis arise in this particular type of disease that can be recognized from the clinical history and which is based on a very definite pathology. In this type of case there is an acute obstruction of the lumen of the appendix by either a fecalith or band, and that this serious type of appendicitis is fundamentally dependent upon the presence of some obstruction to the lumen of the appendix. The obstruction is most commonly a fecalith, or it may be the result of a sharp kinking of the appendix by a peritoneal fold, band or stenosis of its lumen from previous mild inflammatory attacks that finally cause an obstruction. Because the appendix does not

empty the fecalith increases in size, and the obstruction suddenly becomes complete so that decomposition of the fecal contents distal to the obstruction occurs. Gangrene of the wall develops rapidly because of the interference of the blood supply, and rupture of the appendix may occur within six hours from the onset of the first obstructive symptoms. I am sure that we are all familiar with this type of case and have been surprised many times to see how far advanced the gangrenous process may be although the process was not over six or eight hours duration. In this closed loop of obstruction, as Wilkie has repeatedly stated, pus is rapidly formed due to the decomposition of the fecal contents. When such an appendix, which is distended with fecal contents and pus, bursts it is easy to see how a diffuse peritonitis immediately results and a serious situation arises.

The clinical symptoms which accompany this type of disease differ from those of the first class in that there is no initial rise in temperature or pulse, and localized tenderness will be absent, because the serosa of the appendix is not involved and there is no spreading inflammation from the serosa to the omentum or surrounding peritoneum. Not until the appendix perforates do we have the localized tenderness and rigidity. In the acute inflammation, we always notice a fairly rapid rise in the white blood count, but in this type it may or may not be high. Perforation, of course, is always followed by a rapid increase in the leukocyte count.

With this classification of the two distinct pathologic processes in mind, we will be alert for the more serious types of disease and bring them to operation earlier, thus lowering our mortality rate. A few years ago, the term "chronic appendicitis," appeared frequently and there was a time when many appendices were removed with the diagnosis of chronic appendicitis. Possibly many appendices were removed that were not diseased. There were so many criticisms of the procedure that I fear we have turned too far in the other direction and perhaps have hesitated to remove an appendix when it was definitely diseased. In the same manner we have made the mistake of overlooking the case of recurring appendicitis, and denied the patient the benefit of an interval operation. After studying the appendices of many patients removed during the acute attacks, I am convinced that these same appendices have been repeatedly invaded by organisms, and that a pathologic condition was present long before the acute attack occurred which resulted in their removal. I believe one of the serious problems confronting us today is the inability to make diagnosis of this type of case, and I believe that these appendices should be removed when the patients are well. The patients then receive the benefit of an interval operation, the mortality rate of which is practically nothing. It is this type of recurrent appendicitis that develops into the acute obstructive type of disease and is responsible for 90 per cent of our deaths.

I have recently studied our records of appendicitis cases, and find that we have had 914 cases of appendicitis. The mortality rate for this entire series is 3.1 per cent. Of this number, 221 were chronic cases, and there were no deaths in this group. There were 693 acute cases, with 29 deaths, giving a mortality of 4.1 per cent. This includes at least two patients who were brought into the hospital in a moribund condition and were not operated upon. While this mortality rate of 3.1 per cent compares favorably with that of other general hospitals, I am not at all satisfied and still believe that much can be done to reduce this figure.

I do not believe I am visionary when I state boldly that it is my firm conviction that the mortality rate for appendicitis can be reduced one-half in the state of Iowa by a five-year educational program instituted by the Iowa State Medical Society and executed by our efficiently functioning Speakers Bureau. This program should consist of two divisions, one for the doctors of the state and the second for the students of our public schools, colleges and universities. For the physicians I would propose a program that would reach every doctor in the state through district and county meetings. If there are some who do not attend these splendid meetings, they should be reached in some other way. For the students under high school age, I would have speakers appear in every parent-teacher association in the state. For the high schools, junior colleges, colleges and universities, direct information should be given to every freshman class. The burden of the message to all groups, including the doctors, would be: the seriousness of abdominal pain, the deadly danger of cathartics, and the necessity of getting competent medical advice at once. This program, if faithfully carried out for five years, will save the lives of hundreds of the splendid youth in our state.

Hubert A. Royster, who has written so understandingly on the subject of appendicitis in his splendid monograph, says "the tragedy of appendicitis is that even one human being should die of the disease."

Discussion

Dr. Lester Powell, Des Moines: Mr. President and Members of the State Medical Society: It has been a rare privilege for me to hear Dr. Crabb's paper. We hear papers on this subject at every medical meeting, and the reason is that our mortality rate is still too high. I am glad that Dr. Crabb diversified the responsibilities among the family, the friends and relatives, the physician and the surgeon. I agree with him in all that he said about catharsis, purges and laxatives. It is high time that any laxative or purgative should be labeled with skull and cross-bones when it is being considered for a patient with abdominal pains.

The fact that the message was spread more than ten years ago, accounts, I suppose, for less oil, phthaleins, and so forth, being given when one is troubled with any abdominal complaint. Appendicitis is by all odds the most frequent abdominal inflammation encountered, and its symptoms are most bizarre, although the history usually suffices to make a diagnosis. After a thorough history has been taken, the accuracy of a diagnosis can be more or less proved by some simple laboratory tests which we are all able to make at the bedside or in our office, and there is no excuse for not using this aid in establishing a definite diagnosis. After a diagnosis of appendicitis has been definitely established there is no question as to what the treatment should be. There is no medical treatment for appendicitis if diagnosed early, and if a patient has been seen, a diagnosis made, and surgical treatment advised, then the burden of responsibility rests upon the patient, if he is an adult, or on the patient's parent, if he is a minor.

The statistics which Dr. Crabb gave you of deaths from appendicitis, namely, one out of eighty in those not having had a laxative, one in fourteen in those receiving one laxative, and one in seven in those receiving more than one lexative, are self-explanatory. I believe these figures will prove approximately correct not only in Philadelphia but the world over. A diagnosis of acute appendicitis, made from a complete history is usually correct, but how many of us have been concerned with the differential diagnosis between gallbladder disease, the perforating type of duodenal ulcer, and pneumonia with the referred pains? It is sometimes very difficult to make the differential diagnosis. I once heard Deaver say that he cured a case of measles by removing the appendix. I think we can class Deaver as one of the best authorities in the diagnostic world, on appendicitis.

We are all human, and in cases where it is impossible, by a good history and by laboratory aids, to make a definite diagnosis in case of abdominal pains, nausea, vomiting, shifting pain, or with Wilkie's classification in cases where the obstructive type of appendicitis is evident, I think it is then advisable to err on the side of safety, if we must. This approach must be the right one, because in the cases which have been so treated, the mortality statistics dropped from 5.8 per cent into the neighborhood of 3.2 per cent. Therefore, we should make an attempt to keep the knowledge of surgical accidents from the papers, because there is no doubt that delay is caused by fears which are spread from such accounts in our daily press.

On the other hand, I think there are other things that are causing delay at this time. One reason is a person's inability to meet the expense of an operation together with the hospital expenses and the nurse's expenses. As a result, many people delay even seeing a physician about their condition.

However, after a diagnosis for early operation has been made, I think we should pattern after the dictum that has been used by the orthopedist, "Cast them when you find them," and use as our dictum: "Operate on them when you find them," which would hold true in this case. Late surgery may sometimes be replaced by the medical or more conservative treatment as advised by Ochsner; that is, after thirty-six or forty-eight hours, if the patient is put to bed, with rest, nothing by mouth, saline by rectum, or subcutaneous fluids or intravenous fluids, it is possible in a fulminating type of case, to save the life, because an operation in the late case is frequently the cause of spreading peritonitis. If the patient is not operated upon at the time of the acute attack, the interval operation will save lives. If the patients are not seen until later, I believe more lives are saved by the conservative treatment. In a case where the appendix has burst and an abscess is present at the time the patient is seen, he should be watched diligently, and if there is any possibility of the omentum and protective powers of the body walling this infection off, the abscess should be drained and nothing more done at that time. However, an interval operation should follow.

HOW CAN THE PRESENT MORTALITY* FROM APPENDICITIS BE LOWERED?

CLARENCE L. HEALD, M.D., F.A.C.S., Sigourney

When we consider the degree of perfection to which modern surgical knowledge and skill have attained, and the ease and safety with which the inflamed, yet intact appendix is removed, the present high and increasing mortality in appendicitis is most disconcerting, and calls for our serious concern.

How can this increased mortality be explained?

Do you not suspect that one factor may be the increased number of doctors who consider themselves competent to operate for appendicitis? We all know that while the removal of the unruptured appendix is usually simple and safe, the successful operation and management of the ruptured appendix case may require the highest type of surgical skill and judgment. I believe it to be the practice

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of many surgeons at the present time to operate immediately on all cases, late as well as early, and that this practice is a factor in the present high mortality. To remove the ruptured appendix in the presence of a diffusing or a diffuse peritonitis, with the unavoidable traumatism of freshly infected serosa incident to its removal, is to subject the patient to hazards that are unwarranted and unnecessary, and to forget the wise counsel of the masters of surgery.

In every death from appendicitis someone has blundered; the patient or his family, in neglecting to call the doctor immediately, or in giving a cathartic; the doctor, in failing to make an early diagnosis, or if he makes the diagnosis, in letting the golden moments slip by while he is trying the ice-bag treatment; or, possibly the surgeon himself, in trying to do too much, perhaps grubbing out a ruptured appendix, disturbing delicate adhesions and broadcasting what had been a localizing process.

Lord Moynihan said recently that he had never seen a gangrenous, perforated appendix in which an aperient was not the cause. Hospital records and the experience of surgeons agree that in the great majority of cases with perforation, and in cases ending fatally, a cathartic had been administered. Clearly, public enlightenment as to the danger of giving a cathartic for abdominal pain is essential if any considerable lowering of the mortality rate is to be effected.

Undoubtedly an important factor in the high mortality is the frequent failure of the doctor to make an early diagnosis. When this happens, it is usually in the obstructive, gangrenous type of appendicitis, to the importance of which attention was called more than twenty years ago by Van Zwaluenberg of Riverside, California, and more recently and emphatically by Wilkie of Edinburgh, who has pointed out the failure by the profession at large to appreciate the true pathology of this most fatal type, the obstructed appendix. Wilkie states that 90 per cent of the deaths are in this group. Why is this type so fatal? Because it works fast and does not give the doctor much time to make up his mind. Why does the doctor hesitate? Because the temperature and pulse are normal, and it seems to be only an attack of indigestion. The early symptoms of this dangerous type are characteristic, and we must be ever alert for them: sudden onset of intermittent, colicky pain in the umbilical region, and tenderness in the appendix area, with normal pulse and temperature. Early, there may be no vomiting, no muscle spasm. With such a clinical picture, an obstructed appendix, becoming gangrenous, can be safely diagnosed, and immediate operation advised.

There seems to be universal agreement to the rule that in every case of acute appendicitis, if the appendix is unruptured, it should be removed without delay. In such cases, so treated, there should be no mortality. There seems to be universal agreement that immediate operation should be the rule in acute appendicitis in children. The question that has been the center of bitter controversy from the beginning of the era of surgery of the appendix, and still remains unsettled, is what to do with the case that comes to us on the third



Double-barreled drainage tube in use.

to the fifth day. Recently, after a debate by some of the leading surgeons of England on the motion, "That in every case of acute appendicitis immediate operation is indicated," the motion was carried by a vote of 54 to 49. In this country there is probably about the same division of opinion; so that, whatever treatment you may follow in one of these late cases, whether operative or Ochsner, if you lose your patient, you will have one consolation—your treatment has the sanction of authority.

What are we operating for after rupture has occurred? Appendicitis? No, that is about over

now. The trouble now is peritonitis, lighted up by the ruptured appendix, and to extinguish only the firebrand will not put out the fire. This is the period of the negative phase of immunity, "when natural immunity has been exhausted and acquired immunity not fully established." Murphy said, "We know how difficult it is to infect a granulating wound and how easy it is to infect a fresh wound. It is the same proposition exactly with peritoneal infection. The most dangerous day on which to operate is the third or fourth, because on these two days one so frequently finds an abscess without local coffer-damming, inflammatory infiltration or edema. If you open an abdomen and find such an abscess, be happy to let out the pus, close the abdomen down to the drain, and let the appendix remain. Get out of that abdomen, and do not think you have to make a complete operation."

One of the most beneficent contributions to medicine, from Hippocrates to the present time, was Ochsner's discovery that an empty stomach will stop intestinal peristalsis and allow peritonitis to subside. The principles upon which the Ochsner treatment was developed have not been generally appreciated, and the indications for its use have been much misunderstood. To this, and to the failure to carry out the treatment according to those principles are due most of the failures attributed to the method. The Oschner treatment consists in the giving of nothing by mouth, not even water; gastric lavage to relieve nausea and vomiting, the Fowler position, continuous normal salt solution by rectum according to Murphy's technic, rectal feeding of one ounce of predigested beef juice in three ounces of normal salt solution every three hours. After the first gastric lavage with stomach tube, the retention of a Levin tube introduced through one nostril for continuous siphonage, or preferably continuous suction with a simple hydraulic suction device, of the fluids regurgitated from the upper intestinal tract, is an important adjunct to the management of these cases and may make a secondary jejunostomy unnecessary. Many surgeons now give the normal salt solution and nourishment in the form of glucose, intravenously. Deaver, that bold knight of modern surgery, always fearless, except for the safety of his patient, when he recognized the familiar signs of diffusing or of diffuse peritonitis, withheld his scalpel, and ordered the Oschner treatment.

Oschner's disciple and successor, Percy, still follows his former chief in the starvation treatment of spreading peritonitis. After the peritonitis subsides, if a palpable mass is present, if he can open it extraperitoneally he drains, and makes no attempt to remove the appendix. If he cannot open direct into the abscess cavity, he packs away the intestines and opens the abscess. If the appendix is readily accessible he removes it; if not, he simply drains. In all perforated cases in which he does remove the appendix, he amputates the appendix near its base, passes a catheter through its lumen into the cecum and fastens it with a silk ligature, the catheter being brought out through the wound and cigaret drains placed. He is sure that this catheter method has reduced his mortality in perforated cases.

Dixon, of the Mayo Clinic, operates on all patients immediately, except those cases in which the history and symptoms indicate that perforation has occurred within the last ten or twelve hours, and the rigidity and localization are confined almost entirely to the right lower quadrant. In these cases he defers operation, placing them on the Ochsner treatment for at least five or six days, when extraperitoneal drainage can usually be done. In the presence of spreading peritonitis, with general abdominal rigidity, he does only a simple drainage operation, inserting one soft rubber tissue drain downward toward the pelvis, another upward toward the liver, without attempting to remove the appendix, and places the patient on the Ochsner treatment. Dixon believes that after perforation has taken place, the injury has occurred, and that the removal of the perforated appendix does not relieve the peritonitis. Cameron and Sorenson, of the Northwest Clinic, Minot, North Dakota, believe that better results are obtained by immediate operation in all cases, at whatever stage, except in those cases which are obviously improving or localizing. In ruptured cases they open wide, drain thoroughly, with the Penrose type of drain, often leaving the incision open, using a cellophane covered pack. Clute, of the Lahey Clinic, in the presence of diffuse or generalized peritonitis, adopts the Ochsner treatment, with adequate doses of morphine to quiet peristalsis and to keep the patient asleep. If, in spite of this treatment, the distension and vomiting continue, with absent peristalsis, due to extensive peritonitis, or to the obstruction that accompanies peritonitis, he has found that a jejunostomy under local anesthesia is sometimes life-saving. He thinks the mortality of appendicitis can be reduced by the use of spinal anesthesia and a large incision, permitting easy vision of the appendix and its removal without soiling the adjacent viscera.

What, if anything, can be done to limit the extension of peritonitis after perforation has occurred? Peritonitis, starting from the leak in the

appendix wall, is spread by the purulent fluid exudate being carried over the intestinal surfaces and between the layers of the mesentery by peristalsis, and by the overflowing of the accumulating purulent pool, before the defensive reaction of the peritoneum has had time to function. After operation, with or without the removal of the perforated appendix, the patient's chances depend chiefly on the unhampered defensive function of the peritoneum, and on the limitation of the area of infected peritoneal surface. What happens in the first twelve or twenty-four hours decides the destiny of the patient. It seems reasonable to assume that if the purulent exudate is the medium by which the infection is spread, the removal of as much of the exudate as possible would delay to some extent the extension of the infection, possibly until a barricade of adhesions could form to limit its further advance. Most of the fluid exudate can be removed at operation, preferably by suction, but it is rapidly excreted by the irritated serosa, and we must depend on drainage to prevent or to delay its overflow into new territory, and the consequent spreading of the infection.

The ideal drainage is dependent drainage. The usual methods of drainage of the abdomen are against gravity, by overflow.

Some years ago I had made a glass, double calibre drainage tube with three small holes near the lower end. A sterile, one inch gauze roller bandage is threaded down one barrel of the tube and up through the other barrel. The tube, with its gauze wick, is inserted to the bottom of the cavity and the wound closed around it. Every half hour, for the first twenty-four hours, or longer if necessary, the nurse pulls the bandage through the tube until it comes through dry, and cuts off the soiled portion. The gauze wick soaks up the pus from the pool at the bottom of the cavity, and keeps that immediate neighborhood drained during the brief period when drainage is possible, before the drainage tract is isolated by adhesions. When that has occurred, extensive coffer-damming has probably taken place, with the peritonitis subsiding. This method I have used to advantage wherever abdominal drainage is indicated. In cases of diffusing peritonitis, where radical operation would be dangerous, a small incision can be made under local anesthesia, the gauze threaded tube inserted through the flowing well of pus to the bottom of the cavity, and the Ochsner treatment, reinforced by efficient drainage, carried out.

If I were to venture to reply to the question which is the title of this paper, I would offer the following suggestions:

(1) The doctor should, if possible, make a diagnosis on his first visit, and should be ever alert for the dangerous, obstructed appendix, with normal pulse and temperature. Having made a diagnosis of appendicitis, he should insist upon immediate operation.

(2) In cases where an operation is performed, and a ruptured appendix with spreading peritonitis is found, the pus should be removed with the least possible disturbance of the viscera, efficient drainage instituted, and no attempt made to remove the appendix unless it should be easily accessible.

(3) In cases first seen on the third or fourth day, with evidence of spreading peritonitis, a small incision should be made, under local anesthesia, efficient drainage instituted, and the Ochsner treatment carried out in all its details.

(4) Public enlightenment as to the danger of giving a cathartic for abdominal pain. This could be accomplished most directly and effectively by the enactment of a law requiring manufacturers and druggists to print the following legend on the labels of all laxative medicines sold to the public:

"Warning: Do not give this or any other laxative for pain in the stomach or abdomen except upon the advice of your physician. If it should be appendicitis a laxative would be dangerous."

Discussion

Dr. Carl J. Lohmann, Burlington: Gentlemen of the Iowa State Medical Society: In a discussion of the mortality of acute appendicitis, we are dealing primarily with the prevention and treatment of peritonitis from the ruptured appendix.

I wish to commend Dr. Heald and Dr. Crabb on the definite points which they have made in lowering the mortality rate of this most common surgical condition. We have all heard many discussions on this subject in the last several years. However, I have often felt that there have been some inconsistencies in the presentation of its various angles. One of the first points is the part played by the incompetent surgeon. Certainly no man should enter the abdomen who is not competent, both in surgical technic and surgical judgment, to deal adequately with any condition he may find. However, the number of patients who have died after appendiceal surgery because one surgeon and not another performed the operation, is a relatively small percentage compared to that great number who die because they reached the operating table too late, and often because of a questionable or incorrect early diagnosis or temporizing treatment.

The diagnosis is not always easy. Certainly, a large percentage of cases do not follow the textbook picture. I think one's greatest difficulty arises in the differential diagnosis or when some additional pathologic condition is present. When such instances do arise, the decision as to operation must rest on whether it seems more dangerous to operate or to miss the ruptured appendix. We have made far more

mistakes in what we have not done than in what we have done. Dr. Osler has said that the general practitioner, whether his leanings be toward conservative or radical methods of treatment, should remember that the surgeon is often called too late and never too early.

Dr. Heald has given considerable time to the question of the proper time to operate. I cannot help but feel that we are only confusing ourselves with a point that is misleading many physicians. I think, with very few exceptions, possibly the early, localizing abscess or the late, morbid peritonitis case, that there is just one safe time to operate, and that is as quickly as we can get the patient to a hospital. So-called medical treatment is simple enough and certainly should be part of the postoperative care.

If it were possible to analyze the past medical history of all patients, who have died from acute appendicitis or its complications, I believe we would find relatively few that had not had previous attacks. Removal of the acute, simple appendix has a mortality of one to two per cent; general peritonitis, 20 to 30 per cent. An appendectomy performed after an early attack would certainly have saved many lives.

Finally, in considering the reported increasing mortality rate of this condition, I think there has been some misinterpretation by many as to the true significance of the figures. The figures that Dr. Crabb has given you adequately explain the fact that there has been an increase in the mortality rate per 100,000 population. Probably many deaths previously attributed to peritonitis or other causes are now being more correctly reported with the appendix as the primary cause. Furthermore, many men agree that the incidence of appendicitis itself is definitely on the increase, and, if so, we should expect more deaths, unless the death rate per cases is dropping proportionately.

In an analysis of some 13,000 operative cases for this condition in 1920, there was a death rate of 6 per cent. The analysis of the same type of cases in a large Philadelphia hospital for 1932 showed 5.5 per cent.

Personally, I cannot believe, with the public gradually becoming more appendiceal conscious, a little more fearful of the cathartic and hot-water bottle, and surely the profession not going backward in diagnostic and surgical ability, that the death rate per case of appendicitis is on the increase. This, however, should certainly not influence us in ever striving to improve.

THE PERFORATED APPENDIX*

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It seems that many doctors are careless in the choice of words when talking or writing about the vermiform appendix. This attitude tends to make some of us careless in the diagnosis of appendicitis and to treat the condition with indifference; but the cults and public are much more negligent and are directly responsible for a large part of the present mortality. Recently Walker[1] quotes from Finney who in 1914 wrote that: "The last word in appendicitis has not been spoken nor will it be until we have 100 per cent recoveries." Judging from the literature, much of which is misleading, it would seem that we have not made much progress. It is not my purpose to add any new terms or theories, but rather to call attention to the confusion of terms and the carelessness with which words are used by those writing about appendicitis. A brief review is given of the etiology and morbid anatomy of the perforated appendix, together with an analysis of deaths from appendicitis in St. Luke's Hospital, Cedar Rapids, Iowa, during the last three years. The careless use of words in connection with appendicitis is often a source of confusion to other physicians as well as to the general public, which certainly needs more knowledge of this disease. We often hear the expression that "this is only a simple case of appendicitis" but any one who has had a little experience with this disease knows that many appendectomies require extreme skill in their treatment and tax the judgment of the best surgeons.

The term "chronic appendicitis" is not as popular now as it was some years ago, yet some surgeons use this term to cover a large variety of conditions. It is used when other terms should be used, such as, interval operation, recurrent attacks of lower right abdominal pain, or an exploratory operation for some indefinite lower abdominal pain. During the past three years I have seen, from an anatomic diagnosis, 26 uncomplicated cases of chronic appendicitis and 19 others associated with pelvic or other abdominal diseases out of a total of 800 appendices. This gives a frequency of 5.5 per cent, if all cases are considered, or four per cent if only uncomplicated appendectomies are considered.

The expression "perforated appendix" is often used as a cloak or screen to cover a lack of information regarding the real conditions of the appendix. The word perforation is used more often than the term chronic appendix, and with less regard for the truth. A demonstrable perforation occurs about as often as a proved chronic inflammation of the appendix. During the last three years I have seen 38 appendices with perforations, which is an incidence of 11 per cent out of 332 acute cases or 4.7 per cent of all appendectomies during this time. To surgeons and to those writing about appendicitis, perforation appears to mean the same as appendicitis with peritonitis. In a review of cases during the past thirty years Fin-

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ney[2] shows that in the five year period from 1900 to 1905, perforation occurred in 60 per cent of acute cases, while in the period from 1925 to 1930, perforation occurred in 24 per cent. Bower[3] in reviewing appendicitis in Philadelphia shows that 42 per cent of the acute appendicitis cases were perforated, and in another place shows that 42 per cent had peritonitis. From his statistics one would gather that peritonitis meant perforation.

Such authors seem to have the idea that bacteria cannot penetrate the wall of the appendix without perforation taking place. For instance, a surgeon has a case of appendicitis with an abscess; he inserts a drain into the abscess cavity and does not even see the appendix, yet he calls this a perforated appendix. This diagnosis is purely a guess, and I feel that we should adhere to the truth as much as possible and call it an abscess, most likely from an infected appendix. Intestinal obstruction often leads to peritonitis but the surgeon does not attribute this to a ruptured bowel. Bacteria can enter the wall of a gangrenous appendix as easily as water can soak through a gauze dressing. Therefore, we should not use the term perforated appendix unless we can positively demonstrate the perforation.

Etiology: The most common cause of perforation is the presence of a fecal concretion in the lumen of a scarred appendix. The scarring constricts the lumen and the concretion causes pressure necrosis or disturbs the circulation which leads to gangrene. An abscess in the wall of the appendix is also a common condition in the perforated appendix. These occur more often in scarred appendices or are associated with the presence of staphylococci in the perforations of primarily infected appendices. Out of six cases of perforation through an abscess in the wall, five contained staphylococci in the lumen. Perforations through a diverticulum occur very often, but it is hard to prove because it is not possible to determine the amount of necrosis after perforation has occurred. Perforation occurs early in these cases because of the very thin wall, and especially if there is scarring and partial obstruction of the proximal lumen. These diverticula occur practically only in scarred appendices. In cases of acute appendicitis, with a history of one or more previous attacks, the appendix should be removed without delay, because if there should be a diverticulum, perforation might occur very early. In fact, in four cases perforation occurred through a diverticulum in less than twenty-four hours after the first signs of appendicitis. Hence a diverticulum of the appendix is of considerable clinical importance, as has been shown in a previous report.[4] Another etiologic factor of some importance is the position of the appendix. The retrocecal appendix is more frequently affected and scarred. Diagnosis in this type is more difficult, and operation is liable to be delayed until perforation occurs.

Prognosis: The prognosis for patients with perforated appendices is usually unfavorable, but it is somewhat difficult to arrive at an accurate figure in this connection since in the literature all patients with peritonitis are considered as patients with perforated appendices. Hence the statistics are not very reliable in regard to the prognosis in patients with a demonstrable perforation. The results in cases with a perforation, like others, depend upon the condition of the patient, the type of bacterium, the time elapsing between the perforation and the operation, and the position and condition of the appendix. It is a well known fact that there is a certain amount of danger in any operative work upon the aged or the very young. A virulent type of infecting bacterium makes for an unfavorable prognosis. The mortality rate increases as the delay in operation increases, especially in the spreading peritonitis cases. As a rule the retrocecal or acutely gangrenous appendix has a higher mortality rate.

CONCLUSIONS

The term perforated appendix is used more often in the literature than its real frequency warrants. A demonstrable perforation has ocurred in 11 per cent of 332 acutely inflamed appendices removed during the past three years. The possibility of an early perforation must be considered in patients having a history of previous attacks. Other factors most frequently associated with perforation are fecal concretions in the lumen, and an abscess or diverticulum in the wall.

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THE POSSIBILITY OF EARLIER DIAGNOSIS AND TREATMENT OF HEPATIC CIRRHOSIS*

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Of the many diagnostic and therapeutic problems in the field of hepatic disease, none is more difficult of solution than those associated with the

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various types of hepatic cirrhosis. It is possible to show that substantial progress has been made in the recognition of the disease and in its treatment, but there is still much to be desired. In general, the medical profession has been diverted from earlier diagnosis by its preoccupation with more or less artificial classifications of various types of cirrhosis, and from satisfactory treatment by its attempts to deal almost entirely with the end-stage of a pathologic process. The first difficulty can be dealt with adequately by stating that the term "cirrhosis" may refer to any type of diffuse chronic degenerative or inflammatory lesion of the liver in which its structure is grossly injured or disorganized. Atrophic cirrhosis with ascites represents a common end-stage of such processes and is not necessarily a specific pathologic entity, since it is well-established that diffuse hepatic disease of almost any type may progress to cause portal obstruction and ascites. Such a viewpoint precludes, for practical purposes, sharp pathologic distinctions among individual groups of hepatic lesions. It would therefore seem more appropriate to attempt separation of cases on the basis of etiology whenever this is known, since by so doing a therapeutic approach is at once suggested.

The clinical picture of portal cirrhosis is familiar, although the disease is not often encountered in private practice. The term cirrhosis brings to mind the picture of a bed in a charity hospital, in which lies a middle-aged man whose manner, speech, and facies point to his alcoholic past. The color of his skin is muddy and subicteric. His abdomen is tense with fluid, and its surface is covered with a network of dilated, superficial veins. Below the navel the scars of paracentesis remain; the legs are tense and brawny with edema. On inquiry one may obtain a history of flatulent indigestion of long duration, followed by a rapid decline in weight and strength which preceded the swelling of the abdomen. The hospital interne will say that diuretics at first worked successfully, but later exerted almost no effect; that tapping will control the ascites, but that the intervals between tappings are getting shorter, and perhaps that the senior resident surgeon is debating the question of a Talma-Morison operation. This is the common picture of cirrhosis, one of the most discouraging with which the physician can be confronted. The outlook for this hypothetic patient is bad indeed; the most hopeful figures yet reported, those of Chapman, show that although in 80 per cent of such cases the immediate response to treatment may be satisfactory, 75 per cent of the patients are dead in six years or less. As Rowntree observed of these results, treatment was either inadequate or it was given at the wrong time. The latter alternative is, of course, correct; one is dealing with the extreme end-stage of hepatic disorganization and therefore with a state of affairs in which treatment is necessarily doomed to failure. The cirrhotic patient dies in coma, which may be regarded as the index of absolute hepatic insufficiency; from hemorrhage, due to rupture of vessels in the collateral circulation, and from infectious processes, indicating in part that his detoxifying and defensive mechanisms are no longer functioning. At necropsy one usually finds a liver reduced in size, granular and distorted; its normal microscopic structure is completely disorganized and the total mass of hepatic cells is greatly decreased. The portal vascular bed can be shown to be greatly reduced and obviously incapable of maintaining a normal supply of blood. Esophageal varices, ruptured or otherwise, give evidence of nature's attempt to send blood from the digestive tract around an almost impassable barrier.

This description holds for what Rowntree[2] has termed the decompensated stage of cirrhosis. As in cardiac disease, as long as compensation is maintained, the patient suffers no serious injury; once decompensation has occurred, the outlook is infinitely more serious. When one considers the subject in this light, it is apparent that the real problem in cirrhosis is not the care of the decompensated patient, but the earlier diagnosis of the disease in its compensated state and the prevention and intelligent control of the three major factors: ascites, collateral circulation, and hepatic insufficiency. Such an attempt involves consideration of the problems of etiology, of pathogenesis, and of the method of development of the hepatic lesion, and finally leads one to attempt to learn something about the preclinical, pre-ascitic, or compensated stage of the disease and its recognition. During the last few years studies have been made along each of these lines, and it is the purpose of this paper to comment on some of these investigations.

In order to obtain a clear picture of the pathogenesis of cirrhosis, it is well to turn to the experimentally produced hepatic lesion. To produce such a lesion, it is necessary, according to Bollman and Mann, repeatedly to administer sublethal doses of a toxic agent which produces acute necrosis of the liver. The agents ordinarily employed are carbon tetrachloride and tetrachlorethane. Administration of these substances intravenously or by stomach tube produces acute diffuse hepatic necrosis, which eventually leads, through a process of absorption, contraction, or overgrowth of the connective tissue framework, and regeneration of the remaining hepatic parenchymal cells,

to atrophic or hypertrophic cirrhosis. The whole process requires months or even years for its development. With each succeeding dose, there appear more of the symptoms that are characteristic of portal cirrhosis of human beings. Gastro-intestinal disturbances, diarrhea, and intestinal hemorrhages are noted; as a terminal phenomenon slight jaundice and ascites may appear. Death may occur from hepatic insufficiency, from hemorrhage, or from perforation of peptic ulcers which frequently form during the course of the experiment.

There are several points about the course of experimental cirrhosis which deserve especial comment. The drugs must be administered over a long period; the dose must be adjusted so that it produces definite acute necrosis and yet avoids destruction of too much tissue and immediate death. The toxic agents are much more effective when the animal is fasted and are less effective in the absorptive stage of digestion. A diet high in carbohydrates protects against the toxic agents; a diet high in protein has a deleterious effect. Alcohol is a distinct adjuvant to these hepatic poisons, but is relatively ineffective if given by itself. Finally, as the liver is progressively destroyed, more extensive and severe necrosis occurs with each administration of the drug. The reasons for this phenomenon are plain; it can be shown by other types of experiment that cicatrization of the liver, reduction in its blood supply, and jaundice, all of which develop step by step with the experimental cirrhotic process, render the liver more vulnerable to toxic injury and less capable of repair. The collateral circulation, however, remains intact and of itself constitutes a definite menace to the future health of the animal in question. Whether the disease is in a stage of progression or of recovery, it is of particular importance to note that the experimental animal presents few, if any, signs of hepatic disease until almost the entire hepatic substance is destroyed and the capacity for repair is exhausted. Finally, if administration of these hepatotoxic substances is discontinued, the liver is capable of restoration to a point at which it is almost indistinguishable functionally or anatomically from a normal liver. Even animals with extensive cirrhosis, ascites, and jaundice may improve rapidly and regain their normal health when administration of the toxic agent is discontinued and a diet high in carbohydrates is administered.

The significance of these observations for the student of clinical cirrhosis is obvious. The etiologic agent or agents operative in cirrhosis of human subjects must act at more or less regular intervals or fairly continuously over long periods. These agents may continue to act over such periods without producing recognizable signs of hepatic disease until the liver is almost completely destroyed. The phenomena which we designate symptoms of hepatic disease are in reality symptoms of portal obstruction, of collateral circulation which has grown out of control, and of hepatic insufficiency. If the condition is to be detected during its developmental stage, the threshold of suspicion for hepatic disease must be raised and the known etiologic agents reviewed in every suspected case. If they are detected early enough and eradicated, the liver, which is progressing from the preclinical toward the clinical stage of cirrhosis, is still capable of regeneration and repair. Even at a late stage, removal of the toxic substances may result in repair and restoration to health.

What are the known hepatotoxic agents and diseases that are effective against human beings? An important contribution to this subject is that of Fiessinger, who recently published the results of his extensive survey, made by sending questionnaires to pathologists and clinicians all over the world. As is usual, with investigations of this sort, more questions were raised than answered, but some very interesting observations were brought to light. The most pertinent observations related to the use of alcohol. From time immemorial alcohol has borne the condemnation of the public and of members of the profession alike, yet the evidence against it remains almost entirely circumstantial. Fiessinger's survey brings out the fact that cirrhosis is encountered more often at necropsy in Paris, Geneva, and other European capitals, where alcoholic beverages are commonly used, than in other districts where the habits or religious tenets of the population make alcoholism uncommon. For instance, in Geneva cirrhosis was found by Askanazy in ten per cent of postmortem examinations; in Java the incidence was two to three per cent, and in Constantinople which is predominantly Mohammedan and "dry," the incidence fell to less than 0.5 per cent. In this country, cirrhosis is more commonly encountered in metropolitan hospitals than in rural practice. Parker reported an incidence of 5.9 per cent in Boston, and Moon one of 2.3 per cent in Philadelphia. At The Mayo Clinic the figure is much lower. It is also possible to show, from Fiessinger's statistics and from Rowntree's figures, a variation in the incidence of cirrhosis in direct proportion to the availability of alcohol. According to Fiessinger, cirrhosis is most common among the steady drinkers of alcoholic beverages and the chronic tipplers of Paris. Beer drinkers seem to be relatively immune.

However, even if one includes among alcoholic subjects the occasional drinker whose annual consumption of liquor is small, it is impossible to account for more than 40 to 60 per cent of all clinical examples of cirrhosis on the basis of alcoholism. It is also believed that only a small percentage (four per cent or thereabouts) of chronic alcoholic subjects have hepatic lesions of any consequence. In spite of these objections, it is usually believed that in America and in Europe, alcohol is the dominant etiologic agent in cirrhosis. It may, as the experimental studies previously mentioned suggest, act as an adjuvant rather than the principal toxic substance. In the tropics and in the Orient, however, a different situation prevails, alcohol assuming a minor part in these localities. According to the authorities quoted in this survey, malaria, parasitism, and the abuse of spice and condiments appear to be the most important agents in these countries. Malarial cirrhosis is not uncommon in North Africa, and is essentially identical pathologically with alcoholic or atrophic cirrhosis. In Java, cirrhosis from clonorchiosis and scistosomiasis is reported; the same lesions are noted in Japan.

Cirrhosis caused by parasites is usually of the biliary type, with chills, fever, jaundice, and pain. These tropical types are chiefly of academic interest to those practicing in the middle western part of the United States of America. One parasite, however, Entameba histolytica, is capable of producing diffuse hepatitis, and may therefore figure as the cause in an occasional case of cirrhosis. The other parasite of importance is, of course, Treponema pallidum. Its exact relation to cirrhosis is not clearly understood, but the fact remains that most authorities consulted by Fiessinger thought that syphilis was of etiologic importance in from two to eleven per cent of cases in their experience. In some series of cases of cirrhosis, a positive Wassermann reaction has been noted in from 20 to 30 per cent; however, this does not prove that the cirrhosis itself is syphilitic. The syphilitic factor in cirrhosis is extremely difficult to evaluate and must be considered on its merits in each case. The relation of tuberculosis to cirrhosis is even more obscure; it is possible, according to some continental authorities, that tuberculosis may produce hepatic lesions by means of some allergic phenomenon. In the north central plain of this country the two diseases are rarely associated.

In addition to the etiologic agents considered in Fiessinger's report, there are a number of other important substances which are capable of producing hepatic lesions. Arsenic in its various forms represents a hepatotoxic substance which is often overlooked. Arsphenamine and its many derivatives and related compounds have repeatedly been shown to be capable of producing acute or subacute hepatic injury; such injury is not confined to the syphilitic subject, but may represent a pure arsenical effect on a person who has not had syphilis. Inorganic arsenic is likewise capable of producing chronic hepatitis and cirrhosis[6] and should be considered in this connection more often than is now the practice. There is one other widely used drug which in susceptible persons may produce hepatic necrosis approximating acute or subacute atrophy. This is cinchophen, and the derivatives of cinchophen, just as the derivatives of arsphenamine, are also implicated. It is only recently that the common occurrence of cinchophen hepatitis has been realized, and no one as yet knows how many residual or latent hepatic lesions may be traced to the use of this drug. In the survey by Weir and Comfort, the evidence on this point is presented and reviewed, and it seems possible that chronic hepatic injury from this drug may be relatively common. Other drugs are rare offenders, but picric acid, chloroform and tetrachlorethane may be responsible for diffuse hepatic lesions that are capable of progression to the stage of cirrhosis.

As many workers have suggested, certain infectious diseases may serve to lay a groundwork for cirrhosis. Typhoid fever is one well-known example. It is also generally recognized that recurrent infectious jaundice or repeated partial biliary obstruction will also produce chronic hepatic parenchymal lesions. Cholecystic disease may be a factor in certain cases. Splenic disease of various types, especially the so-called Banti's syndrome, and exophthalmic goiter, are other systemic disorders capable of producing cirrhosis. It is certain that the foregoing list is far from complete and that factors as yet unappreciated are more common sources of hepatic injury than any of these. In the opinion of the authorities quoted in Fiessinger's report, no cause can be determined in from 15 to 30 per cent of the cases. This figure, unfortunately much too high for comfort, should stimulate physicians to further study as to the etiology of cases which come under their observation. It is encouraging to note that at least the field is being narrowed as time progresses, chiefly on the basis of careful clinical study.

The diagnosis of hepatic cirrhosis in the preascitic or compensated stage is by no means as difficult as might be considered if one is highly suspicious regarding hepatic cirrhosis and if a thorough inquiry has been made concerning possible exposure to hepatotoxic agents. It is a matter of common knowledge that for every frank

case of cirrhosis observed clinically, a latent or compensated case is encountered unexpectedly at necropsy. The recognition of such cases and the prevention of further hepatic injury by elimination of hepatotoxic substances and protective dietary measures is obviously desirable. Not a great deal is known about such latent or compensated cases from a clinical standpoint. Chapman, Rowntree and I have reviewed the records of fifty-eight such cases observed at The Mayo Clinic, including examples of biliary cirrhosis, hepatitis of possible syphilitic origin, alcoholic cirrhosis, residual cirrhosis from previous biliary obstruction, and hepatic lesions associated with splenic anemia. Of this group, diagnosis was based on surgical findings in twenty-one cases; in the remainder (thirty-seven cases), diagnosis was based chiefly on the following points: a history of some etiologic factor, an enlarged liver with or without jaundice, and the results of hepatic functional tests. Malignant or parasitic disease, amyloidosis, and other causes of hepatic enlargement were excluded by appropriate laboratory or clinical data. In all except ten cases of this group, a history of the action of some hepatotoxic agent, or of some disease known to affect the hepatic parenchyma, was obtained. Twenty-five of the patients had used alcohol freely; ten gave histories of, or manifested some clinical or serologic signs of syphilis; five had suffered from previous hyperthyroidism; nine gave histories of typhoid fever or of malaria, and fourteen gave past histories or presented evidence of cholecystic disease. Six patients had the definite picture of splenic anemia. In almost half of the group, many possible etiologic factors were noted.

The principal clinical symptoms were listed as follows: gastro-intestinal symptoms with hemorrhage in eleven cases; gastro-intestinal symptoms with jaundice in twenty-four cases; gastro-intestinal symptoms with both hemorrhage and jaundice in three cases; hemorrhage only in two cases; jaundice only in four cases, and various gastro-intestinal symptoms only in fourteen cases. In none of the cases was there a history of ascites, but in about a third of the cases a history of slight edema of the ankles could be elicited on questioning. In many cases, recurrent, transient jaundice had been noted over long periods. The physical findings in this series of cases relate chiefly to the presence of hepatic enlargement, jaundice, and peripheral edema. In thirty-seven of the cases in which the diagnosis was not verified by operation, hepatic enlargement was noted; in the twenty-one cases in which exploration was carried out, nine patients had enlarged livers, eleven had atrophic livers, and one patient had unilateral atrophy of the left lobe. Jaundice was present in seventeen cases. Laboratory data were not remarkable except for two facts. Moderate secondary anemia was present in about a third of the group. Of forty cases in which tests of hepatic function were carried out with bromsulphalein, results were positive in twenty-eight. In general, the criteria for diagnosis in this group of cases of compensated cirrhosis consisted of a history of vague gastro-intestinal symptoms with or without hemorrhage and jaundice, a palpable, firm, regular liver, and evidence of disturbed hepatic excretory function as shown by elevated concentration of bilirubin in the blood serum or retention of bromsulphalein.

The final outcome of the disease in these fifty-eight cases of cirrhosis in the compensated or pre-ascitic stage is of some interest. Twenty-five patients were known to be dead five years (average) after symptoms developed. Ascites had developed in five cases before death; three patients had died after gastro-intestinal hemorrhage, and two had expired in coma. Of the thirty-three living patients, twenty were reasonably well, six had had episodes of jaundice, and three had suffered from gastro-intestinal symptoms. The average duration of symptoms in these living patients had been slightly less than eight years, illustrating the remarkable latency of hepatic disease.

On the basis of etiology, some interesting facts regarding prognosis were noted. Syphilitic patients had responded remarkably well, as had those with residual biliary cirrhosis. About 50 per cent of the patients who gave evidence of alcoholism were dead. Among the patients with intermittent jaundice the effects had been about the same. The patients with splenic anemia in general had pursued a favorable course. The bromsulphalein tests had given on the average a remarkably good idea of prognosis, about two-thirds of the patients with retention of dye graded three or four had died in a relatively short time.

It seems evident that these latent or compensated cases are of more than academic importance. Obviously only a fraction of such cases are recognized during the life of the patient. The possibilities of greater diagnostic accuracy in this field have yet to be developed. Clinicians must first consider the likelihood of latent cirrhosis when patients consult them because of vague gastro-intestinal symptoms of long duration; physicians must be on the alert for less striking grades of hepatic and splenic enlargement, and tests of hepatic function must be carried out in suspected cases more often than is now the general practice. Additional diagnostic aids should also be considered in selected cases; laparoscopy and direct

inspection of the liver, as practiced in many German clinics, is apparently a relatively harmless procedure and one which is highly reliable from a diagnostic standpoint. The injection of thorium dioxide for roentgenologic visualization of the liver, as first advocated by Radt, also may be useful. According to one of the most recent works[4] on the subject, a cirrhotic liver gives a characteristic picture roentgenologically. Surgical exploration is, of course, the court of final appeal and curiously enough is well-tolerated. Of the twenty-one cases in the series of fifty-eight observed at the clinic, there were no immediate deaths, in contrast to the known excessive surgical mortality in decompensated cirrhosis.

What can be done for these patients with compensated cirrhosis, once the diagnosis is made? The possible etiologic agents should of course be carefully canvassed and eradicated as far as possible. The alcoholic patient's chance of survival depends almost entirely on his ability to become a total abstainer. The patient with hepatic parenchymal lesions due to cinchophen, arsenic, or other drugs usually presents no very serious problem once the drug in question is eliminated. The same is true of the patient with splenic anemia and related syndromes, provided splenectomy can be performed before the stage of decompensation is reached. In cases of inflammatory or obstructive lesions of the biliary tract, much can be expected after proper biliary drainage has been provided. The prognosis in cases of syphilis, if the patients are carefully and conservatively treated, usually exceeds expectations. Patients with histories of intermittent jaundice, or who have had hematemesis deserve, I believe, surgical exploration. The possibilities of omentopexy, surgical biliary drainage, and ligation of collateral venous channels leading to the esophageal plexus, have not as yet been fully realized in this group of cases. Finally, the protective value of a diet high in carbohydrate, as so fully demonstrated by experimental and clinical data, should not be overlooked. The whole problem of etiology, whenever it is known, and the possibilities of medical or surgical measures designed to prevent further hepatic injury, must be considered in each case and appropriate measures instituted. Much can be accomplished if the problem is attacked from this angle, rather than late in the disease, when the pathologic process has reached the stage of decompensation.

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NEPHRITIS IN CHILDHOOD*

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Before discussing the inflammatory and degenerative processes of the kidney, let us briefly review the physiologic function and the anatomy of this organ.

The human kidney is different from that of such animals as the cat or rabbit, since it is composed of from seven to twenty distinct kidneys fused to form a single organ. This gives a lobulated appearance to the surface on gross inspection in infancy and young childhood. On section the kidney is seen to be divided into the medulla and cortex. The medulla is composed chiefly of papillary ducts while the functioning tissue in the cortex is made up of the malpighian corpuscles and the convoluted tubules. Histologically, the functioning unit of the kidney is the uriniferous tubule consisting of the glomerulus, the convoluted tubule, the loop of Henle, and the collecting tubule.

The glomerulus is essentially a knot of capillaries at the distal end of the uriniferous tubule. The efferent blood vessel of the glomerulus is much smaller in caliber than the afferent vessel, which may increase the blood pressure in the glomerulus or may merely indicate the loss of blood volume there. At the present time the balance of experimental evidence favors the hypothesis that in the glomerulus the urine is formed by filtration through the capillary wall of water and dissolved substances other than protein. Leading from the glomerulus is the convoluted tubule. The original theory that its epithelium only absorbed water has been questioned and it is now quite definitely established that it also has an excretory function, especially of urea and acids.

The secretion of the kidney varies with the amount of blood flowing through it. In the metabolism of the usual food stuffs, protein, fat and carbohydrate, the end products of their de-

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struction or physiologic oxidation in the body are water, carbon dioxide, and nitrogenous waste products. As the function of the lungs is to discharge the carbon dioxide, so it is the duty of the kidney to take care of the nitrogenous excretion in the form of urea, creatinin, and other forms of nitrogen. Both organs, together with the skin, aid in the elimination of water. Inflammation and degenerative changes of functioning cells in the kidney naturally produce changes on both sides of the organ. By this we mean that when the organ fails to function, certain substances will be abnormally retained in the blood serum, and abnormal substances will also be found in the urine. Nephritis is classified into the following types, depending upon the urinary findings and the clinical picture produced by retention of certain substances in the body:

1. Acute hemorrhagic nephritis or glomerular nephritis.
2. Nephrosis or tubular nephritis.
3. Mixed type or chronic interstitial nephritis.

My discussion will be limited to acute hemorrhagic nephritis, since it is the type most frequently encountered by the pediatrician.

Etiology: Hemorrhagic nephritis, often spoken of as monosymptomatic nephritis, is the most common type of renal disease in children. It is invariably preceded by infection elsewhere in the body. Bleeding from the vascular glomerulus is usually associated with or follows infection in the upper respiratory tract, although it may be associated with pyogenic infection anywhere in the body. Aldrich goes so far as to prefix "post infectious" to the name of the disease. We believe that the term "acute post infectious hemorrhagic nephritis" is appropriate and is certainly an improvement over the older anatomic classification "glomerular nephritis". Tonsillitis, sinusitis, or mastoiditis may be the seat of the causative infection but by far the most common antecedent is acute pharyngitis associated with cervical adenitis. Scarlet fever is also a causative factor but accounts for only a small percentage of the total number of cases. Exposure to cold may predispose to the disease, but infection, frequently with hemolytic streptococcus, is the real cause. Toxic agents such as turpentine or carbolic acid may rarely, at least in children, be etiologic factors.

Pathology: The pathologic changes are more pronounced in the glomeruli but are by no means exclusively limited to this portion of the uriniferous tubules, except in a few cases complicated by scarlet fever. At the postmortem examination the kidney is found to be large and deep red in color, the capsule strips easily leaving the marbled or lobulated appearance of the surface. On section there is marked congestion, the cortex is swollen, the glomeruli are prominent and the cortex can be easily differentiated from the medulla.

Histology: Histologically there is proliferation and desquamation of the epithelium lining of Bowman's capsule. The capillaries forming the glomerular tuft are thrombosed. In the majority of instances the pathology is not limited to the glomeruli because the epithelium lining the convoluted tubules are found to be degenerated and the tubules filled with blood cells and casts. The swollen appearance of the gross kidney is mainly due to the dilated tubules. There is often an exudate even into the interstitial tissue, so again the term "acute glomerular nephritis" is not descriptive.

Symptomatology: The symptoms and physical findings in the majority of cases are typical and the condition is easily recognized although occasionally the disease is discovered through routine urine examination. A slight degree of pallor, associated with a puffiness of the face, particularly the eyes, may be the only physical sign on gross inspection. The edema is usually the non-pitting type or even so mild as to be ascertained only by the Aldrich bleb test. The edema is never severe and where present is transient. The usual history is that the child does not properly recover from an upper respiratory tract infection or he is brought to the doctor because of the peculiar red color of the urine. The pallor may be due partly to the preceding infection, and partly to the actual loss of blood through the glomeruli. In the urinary examination, besides the outstanding feature of hematuria, we find a moderate amount of albumin and casts. The amount of urine is not diminished, the dilution and concentration tests do not deviate, the blood shows only a moderate amount of retention of nitrogen, and the return of phenolsulphonphthalein is normal in most instances.

Diagnosis: The differential diagnosis between acute hemorrhagic nephritis and nephrosis is made chiefly on the presence of blood in the urine. In a true nephrosis there is no retention of nonprotein nitrogen in the blood serum and the amount of albumin in the urine is far in excess of that found in acute hemorrhagic nephritis. The differential diagnosis from the chronic interstitial type is made chiefly on the acuteness of the attack and the history of a preceding infection. Hypertension and the marked increase of nonprotein nitrogen in the blood also aid in separating these two types of kidney lesion. Orthostatic albuminuria is easily eliminated by examining an early morning specimen.

Prognosis: The prognosis depends a great deal upon the causative infection, but in general the outlook is good. Guild states that even when the urine fails to clear entirely, albuminuria may persist for years without impairment of general health or kidney function. It is logical to assume that the severity of the renal injury can be judged by the amount of blood in the urine. If the initial infection happens to be an accessible pus pocket such as a maxillary sinusitis, retropharyngeal abscess, or quinsy, where the drainage is free, the duration of the nephritis is unusually short, but if there is a non-purulent cervical adenitis or tonsils too acutely inflamed for surgical removal, the nephritis may last many weeks. Tallerman, of the Children's Department of the London Hospital, reports a fatal outcome in 6.9 per cent. In Aldrich's series the mortality rate was 6.2 per cent. Part of these patients did not die from the nephritis but from the original infection. The average duration of the disease in the various series reviewed was six and a half weeks. In about one in every seven cases the clinical course is hampered by uremia, which we can suspect if the patient complains of headache, visual disturbance, or drowsiness. The best check we have on this complication is a rise in blood pressure. If the systolic pressure is 130 m.m. or above, uremia is very probable. Under proper care, however, it responds to treatment perhaps better in children than in adults. Acute hemorrhagic nephritis, in spite of the alarming appearance of the urine and at times a stormy clinical course, offers a good prognosis.

Treatment: The treatment must be directed toward the underlying cause rather than toward the kidney complication. If the patient is fortunate enough to have pus under pressure which can be drained, the rapid recovery of the acute hemorrhagic nephritis is usually spectacular. On the other hand, if there is an acute pharyngitis or tonsillitis associated with hard tender cervical glands, one must select the most suitable time for surgical interference. If tonsillectomy and adenoidectomy is performed too early an exacerbation of the hemorrhagic nephritis can be expected. If operation is postponed too long, a marked secondary anemia results, due to a direct loss of blood through the glomeruli, and often as a result of an inadequate diet. In the treatment of this condition bed rest is essential. It is not necessary to restrict protein and even in the presence of edema it is not wise to withhold water. Edema is probably a protective mechanism to dilute toxins and should not be feared unless it involves the brain, lungs, or larynx. Uremia is satisfactorily controlled by the use of magnesium sulphate intravenously.

SUMMARY

1. Acute hemorrhagic nephritis is the most common type of kidney lesion found in children.
2. The term "post infectious hemorrhagic nephritis" is more descriptive than the anatomic term "acute glomerular nephritis."
3. The disease invariably is preceded by infection usually situated in the upper respiratory tract.
4. The pathologic changes are not limited to the glomeruli except in a few cases following scarlet fever.
5. The prognosis is good.
6. The treatment should be directed toward the underlying causative infection rather than the kidney.

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BRONCHIECTASIS*

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Bronchiectasis is considered a chronic lung disease characterized by cough with abundant sputum. This is true in part only. The early or incipient stage may be overlooked or mistaken for some other ailment. Although cough and sputum may be the more constant symptoms, the disease as a whole is not limited entirely to the lungs and appendages. The whole respiratory tract may become diseased. A year ago I pointed out that primary etiologic factors may be such diseases as pertussis, measles, pneumonias, etc., complicated with foci of infection found usually in the nasal sinuses, and which in turn aggravate the pathologic condition in the chest. In the course of time a vicious circle will be established between the upper and lower respiratory tracts. In such cases it is reasonable to assume that any early treatment which will prevent or break the circle is a prime factor toward prevention of further progress or relief of the disease, since it is well known that the prognosis of bronchiectasis, if the condition is chronic, is poor. May it be added that the cough of bronchiectasis should not be hastily interpreted as one produced by ordinary sinus disease, tuberculosis or bronchitis.

At this time I wish to call attention to certain factors entering into the diagnosis of bronchiec-

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tasis, especially factors influenced by changes in posture and those which may be readily overlooked. The average patient coughs and raises more sputum after arising in the morning, and again upon retiring. Occasionally during the day there may be another coughing attack. In the well developed disease these symptoms result from accumulated secretions in dilated bronchi at the dependent portions of the lung. When the patient changes his posture, for instance, as lying down, the accumulation will flow or be pressed out into the bronchial tract stimulating a cough which empties it. It is not unusual for the physician to examine the patient after this has occurred and find what seems to be a negative chest. More than one examination may be necessary before the pathologic area is located. I have noted the disappearance of pathologic physical findings following a coughing attack, and this should place the physician on his guard. As a rule, ordinary x-ray films are of little aid in diagnosis. Aside from the usual peribronchial infiltrations found in chronic respiratory disorders, very little else may be determined.

Actual diagnosis of bronchiectasis seems best acomplished by a history of the symptoms, a suspicion of the disease, and special procedures. Lung mapping will not only show the actual disease, but also the location. When one considers the low incidence of hazard with this procedure, the possible discomfort seems justified in order that an early diagnosis may forestall the patient's physical, social and financial handicap which is bound to occur later. It is of especial value to patients with incipient or doubtful bronchiectasis in whom early treatment may check or alter the course of the disease. The following case report will illustrate the early age at which bronchiectasis may develop and the confusing physical finding encountered by the physician.

CASE REPORT

A seven months old infant had passed through three weeks of respiratory disease. He never quite fully recovered, but continued to cough. The cough became increasingly severe until three months later when sputum was raised. Lifting the patient from his bed would precipitate a coughing attack. Anorexia had developed, the patient was not made to eat, and nutrition had failed. Repeated examinations by the attending physician were negative in lung findings. When the patient came under our observation, physical examination of the lungs was nearly negative, notwithstanding the fact that x-ray films revealed some areas of parenchymal infiltration. At necropsy bronchiectasis was found in the dependent portions of the upper lobes.

BRONCHOSCOPY*

James A. Downing, M.D., Des Moines

Bronchoscopy is a general term in ordinary usage in place of the term "peroral endoscopy." It includes direct laryngoscopy, and esophagoscopy, as well as bronchoscopy. It should not be regarded as a clinical or therapeutic entity, but only as another diagnostic or mechanical aid for the internist, to be used with surgery, roentgenology and laboratory procedures.

Bronchoscopy has long ago passed from the stage in which it was used only for the extraction of foreign bodies. In the larger clinics the relation of foreign body extraction to bronchoscopy is about one per cent. In Des Monies we have been performing bronchoscopies about two and one-half years, and we have had splendid cooperation from the members of the profession here in town. Our percentage is about six per cent; out of 915 bronchoscopies, 65 were foreign body extractions.

The greatest value of the procedure lies in the visualized diagnosis and treatment of diseases of the air and food passages. Bronchoscopy is a useful adjunct as direct laryngoscopy and tracheal examination for stridors, congenital infantile larynx, congenital webs, congenital or acquired stenosis, congenital thymic pressure, acquired recurrent laryngeal paralysis, tumors, mostly papillomas, croup, including diphtheritic laryngitis, and streptococcic infections with subglottic edema. More children die from cardiac exhaustion than from asphyxiation. Cyanosis in laryngeal obstruction, aside from foreign bodies, is rare. The symptoms of cardiac exhaustion, with pallor, predominate. Intubation, or preferaly tracheotomy, since the subglottic swelling usually renders intubation useless, should be done before there is marked cardiac failure. Careful systematic plumbing will keep the airway clear. A nurse trained in the care of tracheotomy cases is absolutely essential.

A foreign body in the larynx or trachea may cause asphyxiation with immediate death by complete closure of the airway, either on inspiration or expiration. If there is a loose foreign body in the trachea, an audible slap or thud may be heard, particularly loud at the open mouth.

Complete obstruction of the esophagus may show evidence of laryngeal or tracheal embarrassment, as the secretions, particularly the saliva, must either be expectorated or they will be aspirated into the larynx and trachea.

Bronchoscopy is also useful as an adjunct in the diagnosis and treatment of congenital anomalies of the esophagus, including esophago-tracheal fis-

* Presented before the Eighty-second Annual Session, Iowa State Medical Society, Des Moines, May 10, 11, 12, 1933.

tula, imperforate esophagus, congenital stricture (slow dilatation), congenital diverticulum, and in rare instances, tumors. Evidences of extra-esophageal pressure, such as enlarged mediastinal structures, tuberculous glands, those glands involved in Hodgkin's disease, enlarged left ventricles and diaphragmatic spasm (cardiospasm), can also be diagnosed by direct inspection.

Cicatricial stenosis caused by burns from lye, ammonia, washing soda, or bichloride, and ulcerations following scarlet fever, diphtheria, tuberculosis, etc., resulting in the formation of scar tissue, yield to slow dilatation with esophageal bougies under direct guidance of the esophagoscope much more safely than rapid dilatation or blind dilatation with bougies. The safest of all is a retrograde bougienage performed through a gastrostomy opening by our surgical friends.

Foreign bodies in the esophagus usually present themselves with a history of choking, gagging, etc.; the symptoms of drooling, dysphagia, aphagia, and dyspnea are more or less varied. There may be cough from pressure on the common tracheo-esophageal wall, and in complete obstruction of the esophagus, severe acidosis comes on very early, often within a few hours. Opaque foreign bodies are easily demonstrated by the x-ray. Non-opaque foreign bodies may be demonstrated by the use of a barium capsule and subsequent x-ray, the barium capsule usually lodging just above the foreign body.

(Case reports with lantern slide were shown demonstrating opaque foreign bodies in the esophagus, and barium capsule localization for non-opaque foreign bodies.)

In diseases of the trachea and bronchi, we are able, by the aid of bronchoscopy to visualize pathology, such as acute abscess, chronic abscess, bronchiectasis, obscure thoracic disease, and in pneumonography, after an injection of lipiodol, a subsequent x-ray for lung mapping.

Metallic foreign bodies in the air passages usually give rise to no immediate signs or symptoms, but eventually show pathology in the nature of irritations and lung suppuration. The history, coupled with x-ray findings are diagnostic in these cases. However, non-opaque foreign bodies of a vegetable nature give rise to an immediate severe reaction, even if they do not cause complete obstruction. Peanuts cause the most violent tracheobronchitis, and then follow along less severe reactions from beans, corn, melon seeds, etc. These vegetable foreign bodies give rise to a violent tracheobronchitis, subglottic edema, fever, and toxemia, the severity of which is inversely proportionate to the age of the patient; the younger the patient, the more severe the reaction. So much secretion may be formed that the patient will drown in his own secretions.

The physical signs vary with the area involved and may change from day to day according to the position of the foreign body. Physical signs must be interpreted by the mechanics of obstruction, such as limited expansion, changes in the percussion note, vocal fremitus and breath sounds. There are three types of obstruction: the by pass which shows no x-ray changes; the check valve, manifested by trapped air; and the stop valve, manifested by drowned lung. An x-ray both on inspiration and expiration is absolutely imperative.

(Lantern slides were shown demonstrating trapped air and drowned lung.)

CONCLUSIONS

Bronchoscopy is not a "one man" game. Efficient, well drilled team work is absolutely necessary. The mortality and morbidity rates are in direct ratio to the efficiency of the team work and the skill of the operator. There should be no mortality if the work is carefully done. No anesthesia, either local or general, should be used for children. "The cough is the watch dog of the lungs." Seconds count in the working time of the procedure, which should never exceed twenty minutes in a one-year-old child. Repeated short procedures are more desirable than one protracted session. An adequate instrumentarium is essential; makeshifts make for mortality. If you can do the patient no good, make sure that at least, you do him no harm.

THE FINLEY HOSPITAL CLINICO-PATHOLOGIC CONFERENCE

TWO UNUSUAL PNEUMONIA COMPLICATIONS

WALTER CARY, M.D., Dubuque

The first case to be described this morning is that of a brain abscess, secondary to empyema. The second case is that of a necrotizing pneumonia with abscess formation in a child seventeen months of age.

Case 1. A man, forty-seven years of age, developed a "cold" on May 7, 1933, which was followed by fever and a pleurisy pain in the left chest May 16. A diagnosis of pleurisy was made by his first physician. For four days he had remained at home without any medical attention, although his symptoms continued. A second physician then made a diagnosis of pneumonia of the left lower lobe. Four days later he had a crisis and the temperature fell

to normal for a day. The next day, May 25, the fever rose to 102 degrees. An area of dullness persisted at the base of the left lower lobe posteriorly and this was larger on the next day. Left thoracentesis was done and foul grayish pus was aspirated. The patient was taken to the hospital and closed



Fig. 1. Roentgenogram showing fluid level of the left chest.

drainage established under local anesthesia. Smears and cultures of the pus showed pneumococci but no acid fast organisms.

Following drainage there was definite improvement in the condition of the patient. The temperature fluctuated between 100 and 101 degrees, rectally, until June 13 when a distinct rise began. Two days later a fluoroscopic examination showed encapsulated fluid over the anterior portion of the upper lobe. Under ethylene anesthesia a portion of the sixth rib in the midaxillary line was removed and open drainage instituted. After three days of apparent improvement he again showed a gradual and persistent rise in temperature. An x-ray examination showed density in the left chest with a definite fluid level (Fig. 1). With a diagnosis of encapsulated empyema, the chest was again opened under ethylene anesthesia and a rib resected near the site of the original operation. Following this he gained considerable weight and was able to be in a wheel chair until July 16, when his temperature again began to rise. Since the drainage from the second wound had stopped suddenly, while the other wound continued to discharge, the chest was again opened and another rib resected. A pocket of encapsulated pus was found and there was evidence of direct communication with a bronchus.

Following the fourth thoracotomy the patient improved rapidly for ten days. He had a slight temperature for a few days with no apparent cause. On August 5 he suddenly had a convulsion lasting twenty minutes. During the remainder of that day he complained of a very severe headache. Later he became somewhat drowsy but could be roused easily. He was irrational at times. For a day he had trouble expressing his wishes. He would say a word or two and then seemed to have difficulty in remembering words. Later he was able to converse freely with his family.

On August 11 he had two attacks during which the muscles of the right side of the face and the right arm twitched several times. The right pupil reacted



Fig. 2. A photograph of the left lung showing bronchiectasis and alveolarectasis. The diaphragm is adherent to the base of the lung.

promptly to light but the left pupil was very sluggish. The eye grounds were normal. There was no rigidity of the neck. Sluggishness of the left pupil persisted for several days. A blood culture was sterile after three days incubation.

From this time on the patient was irrational much

of the time, and was steadily growing weaker. He became very drowsy and the difficulty in speech became more pronounced. It was evident that he understood questions asked him, but he could not find words with which to reply. The right side of his face became paralyzed, and on August 17 there was

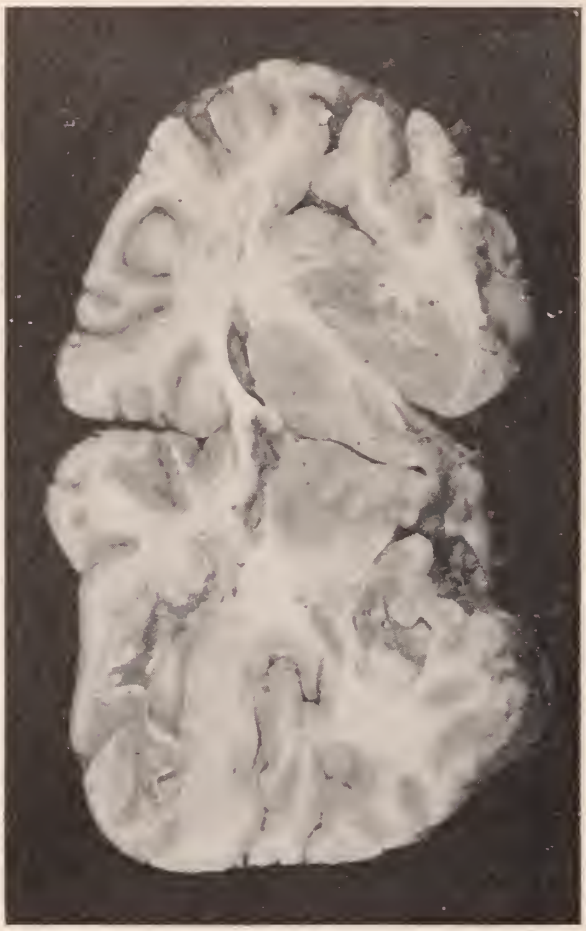


Fig. 3. A photograph of a cross section of the brain showing an abscess of the left parietal lobe.

complete paralysis of the right upper and lower extremities. The next day he died. The clinical diagnosis was metastatic abscess of the brain involving the motor speech area and the lower portion of the fissure of Rolando on the left side.

The essential findings at necropsy were in the chest and in the brain. The right lung had a few fibrous tags over the surface and on section the bronchi contained thick creamy pus, but there were no areas of consolidation. The left lung was bound to the chest wall by dense fibrous adhesions which had largely obliterated the cavity. A small amount of an organizing fibrinous exudate was found over the anterior and lateral surfaces of the lung. There were 25 c.c. of purulent fluid near the left base where the lung was firmly bound to the diaphragm. On section the left lower lobe presented a striking picture (Fig. 2). The terminal bronchi were dilated and somewhat tortuous. No direct communication with the pleural cavity was found. The alveolar spaces were enormously dilated and usually were separated by the greatly stretched walls. In some places two or more distended alveoli had united to form relatively large cyst-like cavities. On removal, the left half of the brain seemed larger than the right. On section a wedge shaped area filled with thick pus was found extending from the periphery of the brain down toward the ventricle, but it had not ruptured into the ventricle (Fig. 3). It was estimated that the infarct contained 50 to 60 c.c. of pus, smears of which showed the presence of streptococci. The diagnosis was as follows:

Primary:

1. Empyema (left): operations: (several thoracostomies); acute and subacute pleurisy with adhesions; bronchiectasis and alveolarectasia (left lower lobe).

2. Embolic abscess of the brain (left parietal lobe).

Subsidiary:

Chronic fibrous pleurisy (right).

Empyema is the most common of the serious complications of pneumonia. Various authors give different figures to show its frequency, varying from one to ten per cent. The variations occur because of the difference in the type of organisms in different epidemics. Among other complications of pneumonia, abscesses in other parts of the body are reported as not very common. A pneumococcus meningitis is not rare, and is probably the most frequent cerebral complication. In this case the abscess can hardly be classified as a complication of pneumonia because it developed nearly three months after the pneumonia. It was rather a complication of the empyema. Undoubtedly a small infected embolus was set free from a small vein in the lung, passed through the heart, and lodged in the brain.

Case 2. A seventeen months old girl contracted a "cold" December 14, 1932. Ten days later she had a very severe attack of coughing which continued for twelve hours. When seen at this time it was noted that the breath sounds were diminished over the left lower lobe. Two days later she had a definite pneumonia of the left lower lobe. She was treated at home from December 24 to January 10. Because of the continued fever and absence of a crisis, it was thought that fluid might be present even though the physical signs were against it.

The child was brought to the hospital for an x-ray examination of the chest. A slight increase in density was shown in the upper right first interspace and apex. There was a large shadow of increased density in the upper left thorax which appeared to lie near the lateral chest wall. The roentgenologist could not say whether this was a localized area of pneumonia or an encapsulated pleural effusion, but it was more suggestive of pneumonia. In the lower half of the left lung, especially posterior to the heart shadow, there was a diffuse mottling, suggestive of multiple small abscesses or of caseous tuberculosis.

Two days later another chest film showed a marked

change in the left lung (Fig. 4). The entire upper half of the lung was typical of pneumonia. The lower half was more dense and seemed to be consolidating. A third film, January 19, twenty-seven days after the pneumonia was first diagnosed, showed

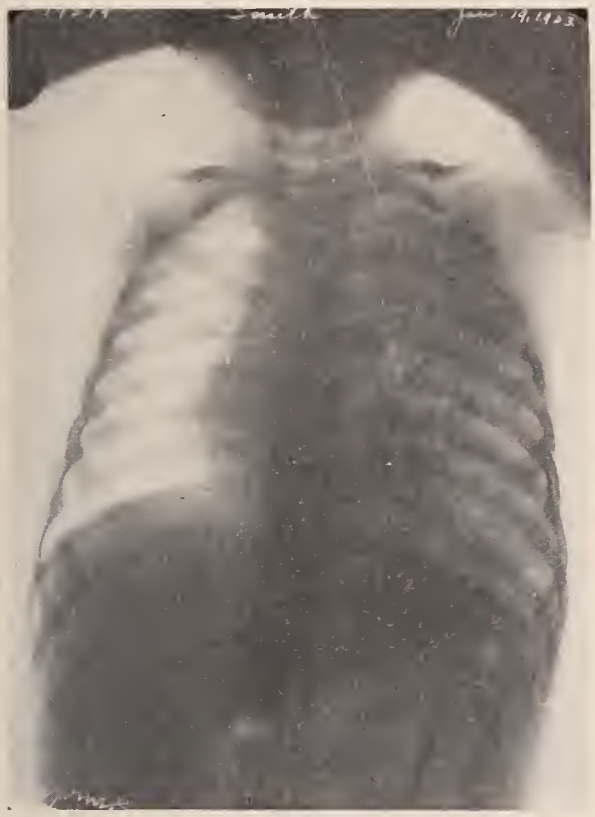


Fig. 4. Roentgenogram showing consolidation of the left lung.

the consolidated area in the upper chest to be more dense. The trachea and mediastinal shadows were displaced to the right suggesting an encapsulated pleural effusion. There seemed to have been resolution in the lower part of the chest. Aspiration was attempted in two places but no fluid was obtained. The patient died January 21, twenty-nine days after the onset of her pneumonia.

Except for the pallor and emaciation, the only important findings at necropsy were in the left lung. There were patches of fibrinous exudate over the pleura of the left lung. The latter was voluminous and felt firm throughout. On section it was filled with exudate and in numerous areas there were frank abscesses (Fig. 5). The main bronchi and the bronchioles were filled with thick, creamy pus. Histologically all the alveoli were filled with fibrin and polymorphonuclear leukocytes. In some areas the alveolar walls were destroyed and large abscesses formed. The bronchi contained numerous polymorphonuclear cells and the epithelium was destroyed in many areas.

The diagnosis:

1. Necrotizing lobar pneumonia with abscess formation (left lung); acute fibrinous pleurisy; emaciation and secondary anemia.

2. Operation: thoracentesis.

This case brings up several points of interest. The first is the duration of the pneumonia which apparently began December 24, and was still present at the time of death, January 21, a total of twenty-nine days. Holt reports that in 132 out of 567 cases of lobar pneumonia in children, the crisis occurred on the seventh day; of the prolonged cases he reports the crisis occurring on the fourteenth day in seven cases, on the fifteenth day in one, on the eighteenth day in three, on the twenty-first day in one, and on the twenty-sixth day in one.

The second point of interest can be found in the x-ray film, which indicates that the lesion in the lung might be tuberculous. There was no history of tuberculosis in the family nor in any known contact. The white blood count varied between 23,500 and 33,500 which is high for uncomplicated tuberculosis, but not high if the condition is complicated by

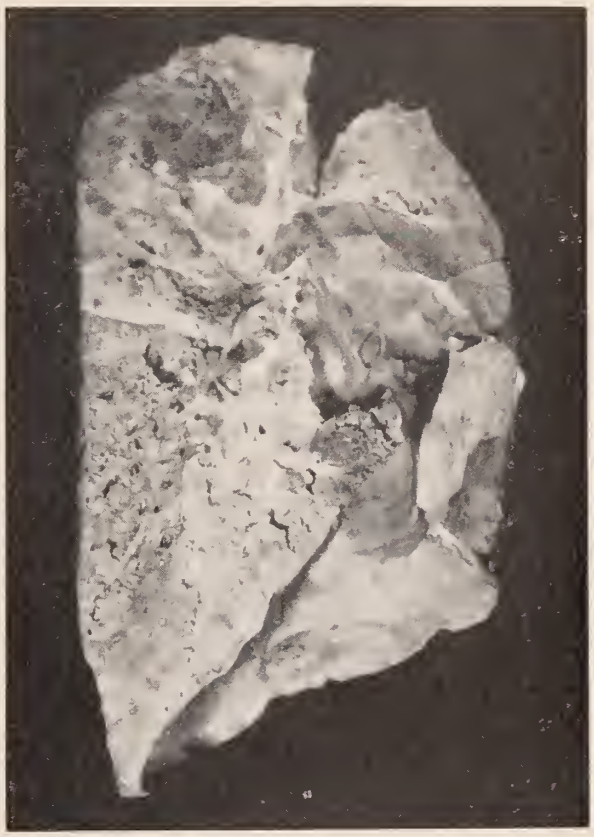


Fig. 5. Photograph of the left lung showing necrotizing lobar pneumonia with abscess formation.

pneumonia. However, the acute illness and the lack of involvement of the opposite lung made the diagnosis of multiple abscesses seem more probable.

The third point of interest is the extent of the involvement of the lung with abscess formation, which is rare in lobar pneumonia. In some ways the picture resembled that seen in influenzal pneumonia.

STATE DEPARTMENT OF HEALTH

Walter L. Bierring

CORRELATION OF LAY ORGANIZATIONS IN PUBLIC HEALTH WORK

At a recent meeting of the Iowa Public Health Association, representatives of the Women's Division, Iowa Farm Bureau Federation, the Iowa Congress of Parents and Teachers, the American Legion Auxiliary, the American Legion, the Iowa Federation of Women's Clubs, the Iowa League of Women Voters, and the Woman's Auxiliary to the Iowa State Medical Society, presented interesting discussions on the rôle played by their particular organizations in promoting a state-wide health program. The profound knowledge of the subject presented and the clearness of expression of each speaker was stimulating and distinctly encouraging. It was particularly significant that each program was directed along medical lines. It was noted, however, that each organization exercised a certain independence of action in following out a particular program, and this brought forth the query as to how these several interests might be more effectively coordinated. There is every reason to believe that the plan proposed by the State Department of Health in conjunction with the Iowa State Medical Society will accomplish this, and it requires no special prophecy to portend what such cooperative effort will mean for a successful public health program in Iowa.

Walter L. Bierring, M.D.

REPORT OF THE COMMITTEE ON CHILD HEALTH AND PROTECTION

The Committee on Child Health and Protection of the Iowa State Medical Society was delegated by the Council of that society to express the views of organized medicine in regard to the work of the Division of Child Health and Health Education of the Iowa State Department of Health. A report recently submitted to the department by the chairman of the committee indicated that a majority of the membership of that committee comprising Fred Moore, M.D., Chairman, Des Moines; J. D. Boyd, M.D., Iowa City; H. E. Farnsworth, M.D., Storm Lake; Lee F. Hill, M.D., Des Moines; and E. D. Plass, M.D., Iowa City, has determined the method by which the literature named hereafter may be distributed by the State Department of Health. The membership of this committee, working independently, grouped the literature as follows: (1) Publications available upon request; (2) Publications available only upon the request of a physician; (3) Publications not to be distributed in their present form.

For more than the past two years the Division of Child Health and Health Education has been distributing ten bulletins prepared by the United States Department of Labor Children's Bureau. The committee indicated that all ten of these publications should be made available to the laity upon request. The Children's Bureau publications approved by the action of this committee include: "Infant Care," "The Child from One to Six," "Prenatal Care," "Why Drink Milk," "Why Sleep," "Keeping the Well Baby Well," "Sunlight for Babies," "Breast Feeding," "Child Management" and "Minimum Standards of Prenatal Care." The committee indicated further that articles prepared by the State Department of Health and entitled, "Fashion Dictates for the Baby," "The Latest Mode for the Well Diapered Baby," "How to Care for Utensils Used in Preparing Milk Feedings," and "Low Cost Layettes," were suitable for distribution upon request. The committee indicated that the Division of Child Health and Health Education should distribute its prenatal letters and diet schedules upon the request only of a physician. The report of the committee suggests the need for another revision of the prenatal letters. Until this revision can be accomplished, the prenatal letters will be mailed to expectant mothers only after a request has been received from a physician.

The work of this committee in reviewing the literature distributed by the Division of Child Health and Health Education of the State Department of Health illustrates how cooperative efforts on the part of organized medicine and the health department may result in mutual benefit to both parties concerned, and to the people of the state as well.

Fred Moore, M.D., Chairman.

MEETING OF THE IOWA PUBLIC HEALTH ASSOCIATION

The Eighth Annual Meeting of the Iowa Public Health Association was held in Des Moines on Wednesday, November 22, 1933. Guest speakers prominent in the field of public health from the states of Minnesota, South Dakota and Kansas helped to make the program interesting and instructive. The 114 guests who registered during the day sessions may be grouped as follows: local health officers who were also physicians, twenty; physicians only, twenty-four; public health nurses, thirty-eight, and lay and professional members, thirty-two.

A group comprised of forty physicians and health officers attended a luncheon session and heard M. E.

Barnes, M.D., professor of hygiene, preventive medicine and bacteriology, State University of Iowa College of Medicine, Iowa City, present an excellent paper on the subject, "The Problems of Local Health Officers." Following the presentation of this paper Dr. Barnes directed a round table discussion on the subject. More than two hundred attended the evening session which was held jointly with the Postgraduate Lecture Course of the Des Moines Academy of Medicine and Polk County Medical Society. The speakers at this session were Drs. P. C. Jeans and C. W. Baldridge of Iowa City and J. P. Leake of Washington, D. C. Dr. Leake is Senior Surgeon, United States Public Health Service, and was detailed by that organization to take charge of and investigate the recent outbreak of epidemic encephalitis in St. Louis, Missouri. He described the nature of this condition, the control measures instigated and the studies which were inaugurated and have been continued to date in regard to the etiology, method of transmission, the pathology and the possible methods of prevention of this disease.

The Iowa Public Health Association closed this very successful meeting by electing the following officers: Dr. G. S. Westly of Manly, president; Miss Ada L. Hershey, R.N., of Des Moines, vice president; and Dr. Carl F. Jordan of Des Moines, secretary and treasurer. Dr. Westly is the local health officer of Manly; Miss Hershey is supervisor of the Des Moines Visiting Nurses' Association, and Dr. Jordan is Director of the Division of Communicable Diseases and Epidemiologist, Iowa State Department of Health.

J. H. Kinnaman, M.D.

EPIDEMIC ENCEPHALITIS IN IOWA IN 1933

Thus far in 1933 (November 20), 47 cases of epidemic encephalitis have been reported. Soon after the outbreak of this disease was reported in the St. Louis area, a case record form was forwarded to each of the physicians following receipt of the report of their cases. Thirty-four case record forms were returned, giving detailed information as to clinical, laboratory and epidemiologic findings. The information contained on these records has been compiled and the data are summarized in the following paragraphs:*

Distribution of Cases According to Age and Sex. The thirty-four records of patients reported as having epidemic encephalitis give the following distribution according to age and sex:

Age Groups	Number of Cases
Under 10	5
10-29	9
30-49	7
50-69	10
70 or over	2
Age not stated	1
	34

Of the thirty-four patients concerned, 17 were males and 17 were females.

Distribution According to Counties. Four cases occurred in Adams county, three cases in Scott county, two cases each in Jefferson, Plymouth, Pottawattamie and Van Buren counties, and one case each in Bremer, Clarke, Clayton, Crawford, Fayette, Henry, Ida, Jasper, Johnson, Jones, Kossuth, Lee, Mahaska, Mills, Montgomery, Muscatine, Poweshiek, Ringgold and Wapello counties. Twenty-seven cases occurred in urban districts, and seven in rural areas.

Distribution According to Onset of Symptoms. Of the cases of encephalitis reported earlier in the year, and for which case records were returned, one had onset of symptoms on December 25, 1932, another on February 10, 1933, a third on February 11 and the fourth on July 1. Onset of illness in the thirty remaining cases was as follows:

Week Ending Saturday	Number of Cases
August 5th	0
August 12th	2
August 19th	0
August 26th	2
September 2nd	6
September 9th	4
September 16th	4
September 23rd	4
September 30th	2
October 7th	4
October 14th	0
October 21st	0
October 28th	1
November 4th	1
Total	30

Type of Onset and Predisposing Factors. Among the thirty-four patients for whom information is available, onset of symptoms was acute in nine cases (onset within one to three days inclusive being regarded as acute). The nature of the onset of symptoms was not stated in eight of the records, and in five instances was a period of eight days or longer. In eleven of the thirty-four cases, a cold preceded the illness and in four instances, influenza. Other conditions mentioned were sinus infection, two; jaundice, one; "dumpiness," one; gastro-intestinal disorders, one; worry, one; malnutrition, one, and malaise, one.

Course of Illness. Some of the cases were still active at the time the case record forms were filled out. Seventeen of the patients had apparently recovered. In one patient, the appearance of a transverse row of petechial dots under all of the finger nails was an unusual finding. Death occurred in eleven cases. In one instance, "weakness and tremors" and in another, "numbness of arms" received mention as sequelae. In no case did it appear as though Parkinson's syndrome would develop.

Duration of Fever. In eighteen cases, elevation of temperature lasted from two to seven days, inclusive. Four patients had fever for ten days and three for fourteen days or over. Duration of the fever was not stated in four instances, and in one case, which

terminated fatally, the temperature had remained normal.

Summary of Symptoms and Signs.

1. Headache: This was severe in twenty-one cases, moderate in nine, absent in three, and not stated in one instance. Occipital and frontal headaches were the most frequent types, being mentioned twelve and eleven times, respectively. General headache occurred in three instances and pain was localized in the top of the head in two cases.

2. Pain: Seventeen of the patients complained of pain in the legs, nine had abdominal pain and five developed backache.

3. Gastro-intestinal Symptoms: The most prominent symptom was vomiting which occurred in twenty-two cases. In sixteen cases there was constipation; diarrhea was mentioned four times.

4. Eye Symptoms: Diplopia was mentioned in twelve of the records, and slight or definite ptosis in eight cases. Nystagmus, strabismus and ophthalmoplegia occurred four, three and two times, respectively.

5. Nervous Symptoms: Neck stiffness was present in thirty-two of the thirty-four cases. Twenty-nine of the patients showed lethargy and tremors were noted in twenty-five cases.

Nineteen of the patients showed apathy, seventeen were sluggish, nineteen stuporous, thirteen comatose, twenty delirious and fourteen somnolent. Some of the patients showed all of these symptoms. There was a positive Kernig sign in fifteen of the cases. Babinski's and Oppenheim's signs were present in thirteen and eleven instances respectively.

Lumbar Puncture. This was performed in twenty-three of the thirty-four cases, thirteen times in the home and ten times in the hospital. The spinal fluid was clear in twenty-two instances and bloody in one case. Cell counts varied from 10 to 400, with lymphocytes predominating. Globulin and sugar were found to be increased in ten analyses.

Diagnosis. Although one of the patients in this series, a child, twenty months of age, is known to have died of tuberculous meningitis, nearly all of the patients in this group are regarded clinically as cases of epidemic encephalitis.

Blood Counts. White blood counts in seventeen patients ranged from 7,000 to 29,000.

Epidemiology. Eighteen of the patients used city water, ten used well water, and two used cistern water. Raw milk was used in twenty-three of the homes concerned; pasteurized milk was used in only five homes. The presence of many mosquitoes was noted in only six of the records. Twenty-four of the homes were adequately screened. In twenty-five cases, there was no history of travel prior to illness and in no single instance was there a history of contact with another case.

* Note: The State Department of Health is indebted to physicians concerned in these cases of encephalitis, for their interest and cooperation in supplying the desired information on the case record forms.

Carl F. Jordan, M.D.

DR. LEAKE SURVEYS EPIDEMIC ENCEPHALITIS IN IOWA

James P. Leake, M.D., Senior Surgeon, United States Public Health Service, Washington, D. C., who directed the investigation of the recent outbreak of epidemic encephalitis in St. Louis and surrounding area, returned to St. Louis, November 25, after a four days' visit in Iowa. In addition to the address which he gave at the eighth annual meeting of the Iowa Public Health Association, held in Des Moines, November 22, Dr. Leake discussed epidemic encephalitis before a group of physicians at Waverly in Bremer county on November 24.

Dr. Leake, in discussing epidemic encephalitis, spoke of the older economo type of encephalitis, formerly called encephalitis lethargica, and known as Type A. The more recent type of the disease, such as caused the outbreak in St. Louis, beginning August 8, has been designated Type B. Speaking of the St. Louis type of epidemic encephalitis, Dr. Leake mentioned that the first symptom was usually headache, followed by fever. The patients were, as a rule "dopey," showed disorientation as to time, and were often hyperkinetic. Eye signs were unusual in the St. Louis cases and none of the patients showed ophthalmoplegia. Meningeal irritation was common, as manifested by stiffness of the neck, Kernig's sign and a spinal fluid cell count as high as 300. Onset of symptoms was usually sudden, occurring during a period of three days. Tremor was usually present, along with a "waxlike" rigidity of the muscles. Superficial reflexes were at first absent and later hyperactive. In addition to headache, there was pain in the abdomen and legs, often relieved by spinal puncture. The spinal fluid cell count was uniformly higher than in the economo type of the disease. The seasonal distribution (July and August) and the fact that people of older age groups were chiefly concerned, also separated the St. Louis type (Type B) from the economo type (Type A). Mortality in the St. Louis cases was higher in the higher age groups. Pathologically, Type B cases showed more diffuse changes than those in Type A. There were perivascular, round cell infiltration, glial infiltration and foci of round cells. Lesions were prominent in the basal ganglia, and pons. Patients with the St. Louis form (Type B) of the disease tend to get well quickly without the Parkinsonian syndrome which tends to follow Type A. Although the virus of encephalitis is known to be distinct from that of poliomyelitis, Type A and Type B encephalitis may be different manifestations of the same causative agent.

Dr. Leake's impression, after seeing a number of the encephalitis patients in Iowa was that they were similar to those in the St. Louis area. White mice are now known to be susceptible to the virus of encephalitis. Dr. Leake obtained blood specimens from a number of patients. The serum will be used in neutralization tests on white mice in the effort to obtain further information as to the identity of the virus.

Carl F. Jordan, M.D.

(Continued on page 683)

The JOURNAL of the Iowa State Medical Society
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DYSENTERY IN CHICAGO

For the second time within a period of three months nation-wide attention has been directed to a mid-western city because of epidemics of unusual proportion and displaying unusual characteristics. The first, occurring in St. Louis, has been discussed editorially in earlier issues of the Journal. The latest has to do with an extensive outbreak of amebic dysentery occurring in the city of Chicago during the past few months.

Several aspects of this epidemic are of more than passing interest and importance. In 1927 the health authorities of Chicago reported a rather extensive epidemic of amebic dysentery, apparently originating in the culinary department of a down town hotel. At that time they determined that a baker employed by the hotel, together with other food handlers, carried virulent forms of the Endamoeba histolytica. All food handlers of this hotel were carefully studied, and those found to be infected were eliminated from the hotel personnel. This procedure effectively controlled the spread of the disease at that time.

In August of this year fifteen cases of amebic dysentery were reported to the City Health Department. This report prompted an investigation of the possible source of infection. In each instance it was found that the patient had recently eaten in the same down town hotel. Further investigations made during the following two weeks revealed thirteen additional clinical cases of amebic dysentery, and twenty-nine carriers at this hotel. It is interesting, and perhaps significant, that one of the carrier employees in the hotel was the baker involved in the investigation of 1927. It is further interesting to note that this employee "was given a thorough course of treatment in a university hospital and after many negative laboratory tests was finally permitted to resume his occupation as a food handler."[1] In spite of his thorough course of treatment it was proved that this man was again harboring the Endamoeba histolytica and that he was definitely a carrier of the disease, supporting the view that it is difficult, or perhaps even impossible, to free an individual once harboring this organism. Certainly the incident is thought-provoking as a public health problem.

While the Chicago epidemic was not recognized or studied until August, no doubt the actual outbreak of cases began as early as May 1, 1933. Since the source of infection occurred in the food handlers of a large commercial hotel, those who had been exposed were scattered widely over the entire United States and abroad. This fact, together with the rather long and variable incubation period of the disease, contributed, no doubt, to delay the recognition of the existence of an epidemic until it had been in progress over three months. After the preliminary survey was completed and the possibilities of the epidemic realized, a delay of over two months more occurred before the epidemic could be announced and a warning given the public of its danger.

At this late date (early November) the Chicago Department of Health, with the aid of the hotel in question, attempted to trace by questionnaire over three thousand of the guests who had registered at the hotel subsequent to the recognition of the outbreak. Since it is estimated that at least one hundred thousand summer visitors were exposed to the disease, the number reported on by the questionnaire method of investigation is relatively small. Of the 3,490 questionnaires returned, however, 180 individuals reported illness, and of this number 69 were positively diagnosed as amebic dysentery with an additional 23 reported as suspected of having this disease. Up to November 23 an official statement reveals 302 cases traced to this common source, involving 96 cities; 265 carriers of the disease have been recognized; 22 deaths have resulted.

The outcome of so wide a dissemination of this disease is still problematic. The hazard, however, of amebic dysentery is not one that can be disregarded in any community; it is one which demands the cooperation of every physician in the United States. The American Medical Association has directed particular attention to the disease, its epidemiology, diagnosis and treatment in special articles and a leading editorial appearing in the Journal of November 18. Newspapers and lay publications have commented upon the situation. By implication some of these comments rather openly critcize the attitude of the Chicago Health Department in maintaining silence regarding the epidemic until so late a date, pointing out that "not until last week, when the city's Congress and Auditorium hotels broke the story by cancelling sched-

uled banquets, did the situation become public."[2] This same publication elsewhere states, "Had the United States been informed two months ago that Chicago was suffering an outbreak of amebic dysentery, a good many people might have stayed away from the city, with consequent loss to its Fair, hotels and restaurants."

With knowledge of the sincerity and scientific training of Health Officer Bundesen and his associates, and their demonstrated zeal in pressing the investigation of this epidemic once its presence was announced, it seems apparent that censure for the belated warning of the public must be directed toward others than the personnel of the Health Department. Until our health officers can be freed from political entanglement and given full authority to enforce health laws, the interests of business will, on occasion, defeat these public servants in maintaining public health.

Iowa physicians are requested to cooperate fully with the Chicago health authorities in reporting every case, suspected or proved, coming under their attention, tracing insofar as possible the probable source of the infection.[3] "To be forewarned is to be forearmed," and it is hoped that this review of reports regarding the epidemic gleaned from reliable sources, will prompt Iowa physicians to greater alertness in the recognition of cases of amebic dysentery which may come under their care.

A further warning should be sounded regarding the use of surgery where unusual or atypical abdominal condition exists. A considerable number of patients have already been subjected to surgical operation with diagnoses of appendicitis, ulcerative colitis or peritonitis, when dysentery was responsible for the symptoms suffered. All have fared badly when operations were performed.

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WASHINGTON COUNTY INTER-PROFESSIONAL HEALTH ASSOCIATION

The newly organized Washington County Interprofessional Health Association met for a turkey dinner in the Masonic Hall at Wellman on Monday, November 27. The organization comprises physicians, dentists, pharmacists, veterinarians and nurses of the county. Approximately 120 were present, including members, their wives and guests. A musical program was furnished by a young women's orchestra of Wellman.

Mr. George L. McDaniel, president of the Association, presided at the meeting following the dinner. Mr. William McGibbon, northwest division manager for Eli Lilly and Company, was the speaker.

OBSERVATIONS ON EXOPHTHALMIC GOITER

During the past decade no revolutionary discoveries have been made concerning the pathology or treatment of exophthalmic goiter. The voluminous literature of this period insofar as exophthalmic goiter is concerned is largely in corroboration of facts previously known or postulated. Our knowledge concerning the chemistry of this condition has been expanded, although no truly outstanding or epochal discoveries have been reported since the isolation and synthesis of thyroxin by Kendall. The classical picture of exopthalmic goiter remains unchanged.

During the past year, however, two investigations in the field of exophthalmic goiter are especially thought provoking. The one is a statistical study into the mortality of this disease, and the second is a chemical study dealing with exophthalmic goiter without an accelerated metabolism.

A study eminating from the statistical warehouse of a large eastern insurance company indicates that the death rate from exophthalmic goiter today is, roughly, twice that of twenty years ago. No adequate explanation for this increased mortality presents itself. Granting that the patient today receives an earlier and more skillful diagnosis, a more perfect preoperative treatment, and an earlier surgical intervention by operators of greater skill, it would appear that the mortality rate should have materially improved. If we accept the theory that focal infections or acute infectious diseases induce or fulminate the exophthalmic syndrome, we would expect a still further improvement in mortality experience, since infections of this sort have been materially lessened. Exophthalmic goiter presents but little ground for faulty diagnosis, especially when fully developed and classical in symptoms as is usually the case at the time the patient seeks medical aid. It would appear, therefore, that the suggestion offered in partial explanation of this markedly increased mortality, namely, that of a more accurate diagnosis, is entirely inadequate to explain these facts. The tables presented do not segregate the cases into operative and non-operative groups. Are we correct in suspecting that the increased mortality occurs in the non-operative group, since undeniable statistics indicate that in the hands of experienced operators the mortality rate following surgery has been decreased? Certainly the answer to this problem is not at hand, but the statistics should prove sufficiently thought provoking to induce other investigators to a careful evaluation of all contributing factors.

For several years conditions presenting some or most of the classical signs and symptoms of exoph-

thalmic goiter have been described in the literature. Their classification has not been easy, and such terms as "larval hyperthyroidism" or "forme fruste" have been applied to the condition. Israel Bram recently analyzes 220 cases of this sort under the title of "exophthalmic goiter without increased basal metabolic rate." Although his title clearly indicates the inclusion of these cases under the heading exophthalmic goiter, Bram, in the text of his article, characterizes these cases as belonging to the Graves syndrome, apparently wishing to retain this non-descriptive and largely disused term for this particular group. One fails to recognize merit in his classification.

The observation, however, that hyperthyroidism may exist without an increased basal metabolic rate is an important one, and definitely upsets standards of diagnosis established and published by leaders in this branch of medicine within the past few years. So firmly was the infallibility of the basal metabolic rate considered in the diagnosis of exophthalmic goiter by Jackson that he wrote in his excellent monograph on goiter and other diseases of the thyroid gland, "In considering its relation to diseases of the thyroid gland, the metabolic unit is valuable for its negative as well as its positive findings. It is just as important from the standpoint of correct diagnosis to find a normal metabolic rate in a suspected case of hyperthyroidism as it is to obtain a high rate in a case of exophthalmic goiter. Neurotic young women who are under weight, who complain of a rapid heart, palpitation, tremor, et cetera, and who present a symmetrical enlargement of the thyroid gland with thrills and bruits, often furnish a difficult problem in diagnosis. The establishment of a normal basal metabolic rate in these cases at once eliminates the possibility of hyperthyroidism and surgery."

Of Brams' 220 patients, while they presented the symptoms of exophthalmos, palpitation, emotionalism, insomnia, and marked fatiguability—most of them possess little or no demonstrable thyroid tissue, and had rather inadequate thyroid functions. All failed to possess the characteristic sign of increased basal metabolic rate. While many of these cases were postoperative or "burned-out" thyroids, 74 of his group were entirely untreated patients.

Paralleling in a way Brams' observations, Verbrycke has reported 34 cases of masked hyperthyroidism in which gastro-intestinal symptoms were the only ones mentioned. Dunlap and Kepler report a syndrome clinically identical with that of familial periodic paralysis but cured only by treatment directed towards hyperthyroidism. If we accept these observations and those made by others paralleling them, it becomes evident that the classical signs and symptoms commonly recognized as diagnostic of exophthalmic goiter may be modified in a given case so that great skill is required to make the diagnosis. Diseases, such as neurocirculatory asthenia, and other allied conditions may not represent true disease entities, or if they do, may require greater refinement in their diagnosis. At any rate, the observation opens new avenues of thought particularly in the recognition and treatment of borderline cases.

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MEDICINE IN SOVIET RUSSIA

(Concluded from last month)

The authorities in Russia have introduced certain institutions that might well be imitated in other countries. At the expense of the government, undernourished children are sent to so-called "forest schools," where they live for two or three months, or longer, under ideal health conditions, gain weight, and are taught how to eat and live before being returned to the ordinary schools. The procedure in the case of persons suffering with tuberculosis is illuminating. In the United States, a case of tuberculosis in a family is usually an economic disaster of the first magnitude. It may, and often does, involve the loss of all the family savings, perhaps the home itself. Nothing of the sort is true in Russia. In the first place, the presence of tuberculosis would undoubtedly be detected at an early date, since a physical examination is required before anyone can assume a new job, and periodic examinations are made on all workers. In the second place, if a worker is found with suspicious symptoms, he is referred to the tuberculosis institute of his city. If he needs to go to a sanatorium, his expenses are paid and he receives his full salary during the entire time he is away, so that his family does not suffer. In the third place, the patient is watched just as carefully after his discharge from a sanatorium as at any other time. His day's work is adjusted to his strength. Every evening he goes to a "night sanatorium," where he has a bath, an hour's rest, supper, medical inspection, and spends the night in a bed which is practically in the open air. Before the revolution, there were only 350 beds for tubercular patients in all Russia; now there are 35,000.

Another field from which American physicians might glean useful suggestions is the Soviet pro-

tection of motherhood and childhood. Here again, the approach is typically practical and scientific, rather than sentimental. For example, if a working woman becomes pregnant, she does not lose her job. On the contrary, she is given twelve to sixteen weeks' vacation with pay. When the time comes to go back to work, the mother and her infant are given full protection. Day nurseries are provided where the baby may be left under expert care, and the mother receives time off for nursing the child.

Babies are decidedly welcome in Russia. Brides and grooms, while they wait their turn to register for marriage, gaze at striking posters telling how to care for babies. On the other hand, the Russian is equally realistic about birth control, whenever that is indicated for medical or eugenic reasons. There is a birth control section in every clinic, and contraceptive advice is freely given. Under the old regime, abortion was a major health problem because it was illegal. As a result cruel and crude operations were performed under cover by quacks, and the death rate was appalling. For the years, 1922, 1923, and 1924, there were recorded 3,000 deaths from criminal abortions, in just the small villages of Russia, exclusive of the larger centers. Today Russia is the only country in the world in which abortion is legalized, and every woman there, married or unmarried, has the right to request that it should be performed. Since this legalization has gone into effect, the death rate has dropped to practically nothing. Out of 90,000 abortions conducted in Moscow in one year, there was one casualty for each 20,000 cases. However, even legal abortion is not favored, and government authorities are trying to prevent its necessity by propaganda on contraception. The institution of legalized abortions has not materially reduced the birth rate, since the total increase in population is at present three and one-half million a year.

The rapid reduction of venereal diseases is another accomplishment of Russian health work, which we Americans must view with considerable admiration, since this phase of medical practice is on the increase rather than the decrease in the United States. Principal among the factors responsible for the reduction of the social diseases in Russia, are the certificates of health required for marriage, and the rapid disappearance of the prostitute. An imprisonment of three years is the penalty for anyone who has an infectious disease at the time of marriage. Before the war, there 15,000 registered prostitutes in Moscow. Had the rate progressed on the old scale in relation to the growth of the city, there would now be 30,000 registered. Since efforts have been made to stamp out this vice, the number has sharply diminished, until in 1931 there were only 700 known to the authorities, and of these about 500 were in the prophylactoria. When a woman is arrested for soliciting, she is not thrown in jail, but is instead brought to a prophylactorium, a sort of clinic and factory school combined. In these institutions, the women are treated medically, and what is more important, they are given education and training for some constructive occupation.

In 1913, there were less than 13,000 physicians in the whole of Russia to care for a population of 150,000,000 people. In some country districts, there was only one physician to thirty or forty thousand people. By 1931 the number of physicians in Russia had been increased to 37,500, and it is expected by the end of 1933 to add 44,500 more, so as to have then some 82,000 practitioners. In thirteen years, the general death rate for all Russia, was lowered from 28.3 per thousand to 20.9 per thousand, a reduction of thirty per cent. An astonishing comparison in death rates is that of New York City and Moscow for the year 1926. New York City's death rate was 12.8 per thousand, while Moscow's was 13.4 per thousand. Therefore, whatever else is said of medical practice in Russia, we must admit that outstanding and praiseworthy results have been accomplished in a comparatively short length of time.

It is probable that the average Russian physician or dentist does not have professional education and training equal to the average practitioner in America. It must be remembered, however, that those students in Russia do not have the advantages of the foundation upon which medical practice in the United States is based. They have an entirely different problem with which to deal, and they are attacking that problem in a strange, but nevertheless energetic manner. Who can say which system is most to be desired? Our own system of medicine has not gone unchallenged. In fact, it has been seriously questioned during the past few months. Statistics prove that almost miraculous results have been accomplished along certain lines of endeavor in Russia, in spite of the lack of adequate medical personnel, the ignorance of the people, their past history of living under most unsanitary conditions, and the opposition of the great nations of the world. For the first time in any country the varied problems of medical care have been looked at as a whole, and the service for their solutions correlated.

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Old Fires and Fears*



Back to medieval days goes the Christmas Seal this year to depict the Yule log dragged toward the manor house by retainers impatient to begin the feast of Christmas. Happiness and cheer marked the season, with open-handed charity to the poor. Baronial halls were thronged with lords and ladies, jesters, acrobats, carol singers, pages, and stewards. Gay times indeed were come when the enormous log filling the great kitchen fireplace was lit with brands preserved from the last year's celebration; but what the design of the Christmas Seal does not show about those early days, is that life was so difficult and so precarious as to make any one of the many depressions of modern days seem like prosperity by contrast. When medieval England was at the height of its glory, two million of the three or four million people of London died of the plague. Throughout the country, houses were closed, empty of all but the dead, and in some villages only a few gaunt survivors were left to struggle for a bare existence. The learned men of the day blamed the plague on congestion of the planets. The means of transmission from the heavens to man was declared by the wise to be "corruption of the air." The best counsel was to hold before the mouth and nose, bread which had been soaked in vinegar.

With the passing of the guilds of workmen in the sixteenth century and the taking of manorial lands from the peasants for sheep-herding, poverty grew more general. The population multiplied and the idle became vagrants; the vagrants in turn became criminals; "So discouraged with myserye and povertie that they fell dayly to thefte, robbery and other inconvenience, or pitifully dye for hunger and cold." Leprosy was common. Once declared a leper, civil death look place. The church had a special ritual for use which contained the words: "Be thou dead to men." Seclusion in a leper-house followed, and the sufferer was forever cut off from his kind. In 1563 came the "sweating sickness." The country was thrown into a panic. Men danced in court at nine and were dead by midnight. The holocaust continued despite the ringing of church bells, the reading of the homily of death, and the burning of blue crosses. The Thames was black with boats filled with trembling citizens seeking an escape from London and sudden death. All the approved methods of prevention and cure failed. Cutting holes in the skull, pummeling patients, and the use of charms and incantations to coax out the demon were without avail. Even those who had purchased high-priced amulets from men who doubtless guaranteed a cure or money refunded, obtained no protection, but were counted out along with their less affluent neighbors.

Hard times in those days were all the time. There were no employment relief agencies, no way to feed the hungry. Famines recurred. Only the strong could eat; the weak starved. There were four major famines in the eleventh century, involving the whole United Kingdom. In Sussex the inhabitants were so maddened by hunger and despair that they joined hands in groups of 50 and hurled themselves over the cliffs into the sea. With famine came pestilence. The "Black Death" appeared in every generation from the fourteenth to the seventeeth century, often wiping out a quarter of the population. No wonder, then, that Christmas time at the manor house should be the occasion of hilarious festivity, bringing release from the cruel memory of devastation, and from the fear of worse disasters to come. Those who had gave freely at this season to those who had not.

This is the story the 1933 Christmas Seal could tell of the period it pictures. It could tell, too, of the toll, year after year, which the White Plague exacted, continuing its ravages until the present. The seal could say that in medieval days the merit in giving was thought to be wholly in the motive behind the gift; but that today the important thing is believed to be the purpose achieved by the gift. The seal could say that in the work which it does every year, a good motive and a good purpose combine to produce a good deed. Today we know what causes tuberculosis, and we know how to prevent it. Money which the seals bring in saves human lives from a disease which still kills more people between the ages of fifteen and forty-five than any other disease. So it is well at Christmas time to think of giving. It is well for the heart to warm with a good motive and the head to supply a good purpose. No motive can be higher than to wish to share with others at Christmas time; no purpose more useful than to help save human lives.

*Prepared by Dwight Anderson, for the National Tuberculosis Association.

THE OPEN FORUM

We agree with Dr. T. F. Thornton, President of the Black Hawk County Medical Society that "This is a fine article. Why not have it printed in the State Journal?" Agreeable to this suggestion, we reprint from The Voice, official bulletin of the Black Hawk County Medical Society of November, 1933, the following article prepared by Dr. Smith, president of the Iowa State Medical Society, 1931-1932:

WHAT OF THE FUTURE?

By Dr. Channing G. Smith, Granger, Iowa

Most of us are more interested right now in the problem of providing our daily bread than we are in idle conjectures concerning our future economic status. Nevertheless, we have all noticed and read news dispatches containing reiterated statements coming from government officials, regarding our economic future. These statements are evidently inspired, have not been refuted and are no doubt intended to prepare the people for certain fundamental changes that are expected to take place. The assertion that has made the greatest impression upon me is that "The day of rugged individualism is past and hereafter each and all must work together for the common good."

In all probability the American people, with or without the aid of the NRA, will emerge from this present situation more prosperous, stronger and more imbued than ever with the ideals upon which our government is founded. In all probability you and I will continue with our own little failures and our little successes just as we have always done. However, suppose that the current conditions should prevail for say another three years. You ask: "What will be my situation in November, 1936? Do I have the financial strength, the moral courage, and the inspiration of the traditions of my profession that will enable me to carry on under the present circumstances, face the future and build my practice anew, if need be? Or, at the end of this time will I be so discouraged that any position which provides a salary sufficient to meet my most pressing needs will seem preferable to me?"

Personally, I am very proud of the fact that ours is a dignified profession, that we have a code of ethics, that we have high ideals and that the word altruism is associated with our vocation as with few others. What is going to happen to this dignity, to our ethics, ideals and altruism? Will we come through intact, if, as, and when the depression ends, or are we to see a radical socialistic change in all things associated with medical care? How will the public, under continual stress, react to present day medical care? What will they think of us, individually and collectively in another one, two or three years? With everyone expecting relief through governmental agencies, what demands will they make to assure the continuance of the presence high state of public and private health?

The national and state governmental agencies allegedly take care of the indigent sick. The rich, of course, are still able to procure any kind of medical care that they desire. What about the great middle class of people that makes up the bulk of the population? This group is composed of decent, independent, honest and honorable people—the backbone of our civilization. These are the patients whom it was and is a pleasure to treat. Heretofore they have been able to select the doctor of their choice and also able to pay their medical bills when they were due. These people are just as good as you and I, are just as hard pressed as we are and in any final analysis, their relative position is just as important as yours and mine. In other words, I believe that their problems of medical care are our problems as well.

I presume that in our locality we have a representative medical practice such as is found in any little Iowa community—made up of the very poor, laborers, farmers, miners, merchants and those in "white collar" jobs. I imagine that our experience is multiplied by that of every other similar practitioner. It is astonishing and depressing to me to see the lack of proper medical care among these people. A few days ago a young lady went into coma from an acute nephritis while she was being carried into my office for attention. Two children with severe untreated pneumonia were brought in within one week. An elderly woman with a heart lesion died while coming through the door of my office. When I see the neglected functional troubles that may some day develop into serious organic diseases; when I note the necessary surgery that is being postponed; when I do happen to make a call to a patient's home and hear him say, "Doctor, for God's sake don't send me to a hospital, I can't pay the bill" instead of the old familiar question, "Doctor, when will I get well?", I wonder just what these people will eventually be driven to demand of the government.

I frankly do not know what the answer is to these many problems. If prosperity is really "just around the corner" and returns soon, as it has always done before, we will continue the practice of medicine as private individuals, whether rugged or not. Should this upturn be delayed for any considerable length of time, the question of adequate medical and surgical care for everyone is going to be one of the major problems of the government. Very definite reports indicate that certain governmental agencies are already considering these conditions. As far as I know, nothing has been proposed to date except immediate relief through the national government.

The people themselves have so far never asked for nor wanted any such change as was advocated in the majority report of the Committee on the Costs of Medical Care. In fact, the average individual is friendly toward the medical profession. He

has a high regard for his doctor and a personal interest in him. It is of the utmost importance to us to continue to merit and maintain this harmonious relationship.

It is my opinion that medical men will not be found lacking in either brains or initiative in meeting this present crisis. I believe that we should take especial pains to see that no deserving person lacks any care that we can give him, regardless of whether he can pay or not. For those who can pay something, our charges should be reduced in keeping with the ability to pay, always remembering that "the quality of mercy is not strained."

State Department of Health

(Continued from page 676)

TOXOID IN DIPHTHERIA IMMUNIZATION

In the November number of the Journal, page 624, an article entitled "Toxoid and Toxin-antitoxin" discussed the advantages of two treatments of toxoid over the older preparation toxin-antitoxin.

A third diphtheria preventive agent, alum precipitated toxoid, has recently received widespread publicity. Although preliminary reports indicate that one dose of this preparation induces an active immunity in a high percentage of those treated, it seems unwise, from the standpoint of the State Department of Health, to recommend its universal application at this time. Those physicians who use this product in their private practice may help to establish its efficacy and advantages over the two proved preventive agents, if such exist, by observing carefully the presence or the absence of unfavorable reactions and determining by means of subsequent Schick tests the percentage of treated children developing protection. It will be recalled that following the introduction and use of toxin-antitoxin, a period of seven years elapsed before it could be stated with certainty by the aid of the Schick test, that the duration of immunity against diphtheria was seven years. Later on it was possible to state that permanent immunity develops in the majority of children following treatments with toxin-antitoxin. During the past ten years, the immunization of large numbers of school children in Iowa has been carried out, for the most part, with toxin-antitoxin. Within recent years, a newer product known as toxoid has been introduced which requires two treatments and which, time and observation have shown, has certain distinct advantages over toxin-antitoxin. The use of alum precipitated toxoid, which requires but one treatment, has not been followed up with subsequent Schick tests on a large enough group of individuals and over a sufficiently long period, to warrant its unqualified approval at this time.

Therefore, for the present, the policy of the State Department of Health will be to advise the use of toxoid (two treatments) in the immunization of groups of school and preschool children, first, in order to facilitate the work from an administrative standpoint, and second to avoid confusion among parents, teachers and others concerned with measures of disease prevention.

AMEBIC DYSENTERY

The State Department of Health has recently received several telegrams from the Chicago Board of Health relative to the outbreak of amebic dysentery, with probable origin in Chicago and affecting people in many parts of the country who visited Chicago. In a letter dated November 23, Dr. Bundesen advises that to date there have been "302 cases, involving 96 cities, 265 carriers and 22 deaths. It has been traced to almost every state, as well as to Canada and several foreign countries." The letter also mentions the fact that "many of the cases of amebic dysentery are being treated as intestinal influenza, mucous colitis, appendicitis, or ulcerative colitis."

The State Department of Health has thus far received reports of two cases of amebic dysentery in Iowa, with possible origin in Chicago. It is hoped that if further cases develop, these may be promptly reported to the Department. Laboratory reports on fecal specimens are of great aid in confirming diagnosis. It is desired that in the case of patients who have been in Chicago shortly before onset of symptoms, this fact, along with the name of the hotel, restaurant or eating place be stated on the report card, after the item "probable source of infection or origin of disease." It is well to bear in mind that amebic dysentery is endemic in various localities in this state. Several cases have recently been reported in which there is no apparent relationship with the Chicago outbreak. A number of cases of amebic dysentery occurring in southwestern Iowa have been carefully studied during the past several years by A. A. Johnson, M.D., a clinician in Council Bluffs.

PREVALENCE OF DISEASE

	Oct., '33	Sept., '33	Oct., '32	Most Cases Reported from
Diphtheria	82	51	97	Linn, Pottawattamie
Scarlet Fever	272	125	164	Polk, Taylor
Typhoid Fever	16	34	41	Dubuque, Wayne
Smallpox	4	0	13	(For State)
Measles	6	5	7	Woodbury
Whooping Cough	96	76	34	Dubuque, Scott, Tama
Cerebrospinal Meningitis	1	0	3	Appanoose
Chickenpox	80	13	210	Sac, Blackhawk
Mumps	10	8	25	Washington, Woodbury
Poliomyelitis	13	13	9	(For State)
Epidemic Encephalitis	13	25	1	(For State)
Tuberculosis	39	41	47	Des Moines, Linn
Undulant Fever	4	10	3	Blackhawk
Syphilis	130	144	229	(For State)
Gonorrhea	185	242	248	(For State)

SPEAKERS BUREAU ACTIVITIES

MEETING OF MERIT

The distinction for having the "Meeting of Merit" for November, 1933, is awarded to the Dubuque County Medical Society. Their meeting was held at Dubuque on November 14, at which time Dr. Arthur J. Cramp, Director of the American Medical Association Bureau of Investigation, gave an illustrated lecture on "Pink Pills and Panaceas." It was an open meeting and each member of the society was given ten tickets which they were asked to distribute among their patients. The tickets entitled the bearer to attend the meeting at no charge.

The medical profession is coming more and more to realize that it is their responsibility to educate the public in matters pertaining to health. Meetings similar to this one sponsored by the Dubuque County Medical Society make a distinct contribution to such an educational program. Meeting with the doctors in this way and hearing messages planned primarily for the doctors, but in which the public is vitally concerned, the laity will gradually understand that the doctors are genuinely interested in their welfare and in their problems.

Since the great increase in the use of advertising, the problem of "Pink Pills and Panaceas" has become an outstanding one, and a talk on this subject should be unusually interesting and worthwhile to both the medical profession and the general public. The Dubuque County Medical Society is to be congratulated on arranging this program, and especially commended in making it possible for the public to attend.

* * * * *

What about the programs of your county medical society; have you had an exceptionally interesting one, a well attended one, or an unusual one? Write in about it. You may have the "meeting of merit" for next month.

RADIO TALKS

WSUI—Thursdays, 8:00 p. m.
WOI—Fridays, 4:00 p. m.

December 1—Tuberculosis—Christmas Seal Sale.
December 8—Sickness and Character.
December 15—Colds—Gordon F. Harkness, M.D.
December 22—The Greatest Gifts—H. C. Payne, M.D.
December 29—A Health Inventory—J. E. McFarland, M.D.
January 5—Whooping Cough—G. E. Harrison, M.D.

POSTGRADUATE WORK CLOSES

The end of November brought to a close the postgraduate courses being held at Algona, Jefferson, Des Moines and Marshalltown. For a period of ten weeks approximately 250 of the doctors in the Iowa State Medical Society have been attending these lectures on pediatrics, obstetrics, and the diagnosis and treatment of common medical disorders, given by the faculty members of our College of Medicine. Those who have attended have been enthusiastic about the high standard of the lectures given in these courses. The lecturers, in turn, have been pleased with the excellent attendance, interest and attention of the doctors who have been taking the work.

Requests have come in from two or three centers for postgraduate work in the spring. If a sufficient number of members are interested in spring courses, the Speakers Bureau will be glad to arrange them. If you want a course in your locality, get in touch with your county secretary and have him write the Bureau at once.

HOME TALENT

The Speakers Bureau is discovering numerous excellent speakers among the members of the Iowa State Medical Society. A scientific speaker encounters difficult tasks in presenting his material to a lay group. This is especially true in the medical profession. The reports quoted below are typical of the many we receive from lay organizations to which we are sending speakers. They indicate the quality of the speakers we have in Iowa and also show the value and the far-reaching effect our education program is producing.

"Dr. S' talk was the talk of the town for many days afterwards and it certainly was a fine talk. Dr. S. had a way of bringing the subject out so every one present could understand it. We can only give Dr. S. our best recommendation as a first class speaker and hope we may be able to listen to him some other time."

"Dr. C. delivered a very interesting address. He took the subject up from an angle that was very interesting to everybody and in a way that anybody could understand. It just happened that the same day he appeared on our program we had another speaker —of national reputation. I believe that we were more impressed with Dr. C.'s speech than that of the other man's. We appreciate very much your sending Dr. C. and would be pleased to have him appear some time in the future."

WOMAN'S AUXILIARY NEWS

Edited by the Press and Publicity Committee

Mrs. Oliver J. Fay, *Chairman,* 10 Thirty-fifth Street, Des Moines

WHAT PRICE VANITY?

Attention is directed to several articles in the November 11 issue of the *Journal of the American Medical Association,* reporting six cases of serious injury suffered by women who permitted beauty parlor operators to dye their eyelashes. One of these cases involved the loss of vision. In five of the six cases, the serious effects were due to a product called "Lash-Lure." Previous reports concerning this particular product have been received, so that to date there have been sixteen cases of severe effects following the use of a single product, Lash-Lure. This preparation is an aniline dye, and every physician, and practically every responsible beauty operator, knows the risk that is run in the application of dyes of the aniline type to the hair of the scalp.

The *Journal of the American Medical Association* points out that cosmetics are under no national control. The National Food and Drugs Act defines a drug as a substance that is used for the prevention, mitigation or cure of disease. Therefore, the drugs which are used in certain cosmetics, no matter how powerful or poisonous they may be, are not drugs according to law. As a result, the cosmetic industry is free of any legal restrictions of a national character. The tragic results following the use of Lash-Lure emphasize the need for national control over the sale and use of cosmetic preparations.

NEW AUXILIARY IN POTTAWATTAMIE COUNTY

Mrs. M. C. Hennessy of Council Bluffs was elected president of the newly organized Woman's Auxiliary to the Pottawattamie County Medical Society, at the meeting held in Council Bluffs, Thursday, November 9. Other officers are: Mrs. Morris Moore of Walnut, vice president; Mrs. S. D. Maiden of Council Bluffs, secretary, and Mrs. V. D. French of Carson, treasurer.

The business meeting was preceded by a noon luncheon at the Hotel Chieftain, after which A. A. Johnson, M.D., of Council Bluffs, and Mrs. W. A. Seidler of Jamaica, president of the Woman's Auxiliay to the Iowa State Medical Society, spoke briefly of the advantages and benefits of an auxiliary to the community, as well as to the medical society. The Pottawattamie Auxiliary will have thirty-six charter members, and will meet monthly.

Out of town guests at the luncheon and business session, in addition to Mrs. Seidler, were: Mrs. James A. Downing of Des Moines, president elect of the state organization; Mrs. P. W. Beckman of Perry, first vice president, and Mrs. Thomas A. Burcham of Des Moines, chairman of the legislative committee.

WEBSTER COUNTY

Dinner places for fifty-three were arranged at Wraywood, Monday, October 23, when members of the Woman's Auxiliary entertained the Webster County Medical Society. An interesting program of dance numbers and vocal solos was presented; a one act play "Toy Heart" was reproduced, and the remainder of the evening was spent at the card tables. Arrangements for the program were in charge of Mrs. R. C. Sebern, Mrs. Emerson Dawson and Mrs. E. M. Kersten.

CLARA EDNA VINSON

Mrs. Clara Edna Vinson, wife of Dr. Harry W. Vinson, of Ottumwa, died Wednesday, September 6, in a local hospital, following a short illness which resulted from a throat infection. Mrs. Vinson was born and spent practically her entire life in Ottumwa, where she was active in church and club work. She was a member of the Woman's Auxiliary to the Wapello County Medical Society. Dr. Vinson was secretary of the Wapello County Medical Society for seventeen years.

SOCIETY PROCEEDINGS

Black Hawk County

G. Earl Garside, M.D., of the Augustana Hospital, Chicago, was the speaker of the evening for the Black Hawk County Medical Society meeting held in Waterloo, Tuesday, November 21. Dr. Garside spoke on Intra-abdominal Complications of Appendicitis, and his address was discussed by W. A. Rohlf, M.D., of Waverly, Frank R. Cutler, M.D., of Cedar Falls, and Frank T. Hartman, M.D., of Waterloo.

Boone-Story Society

Thirty-one members of the combined Boone and Story County Medical Societies met in Nevada, Tuesday, November 21, for their regular joint meeting. The scientific program of the evening was furnished by G. E. McFarland, M.D., of Ames, who read a paper on Obstetrics.

Buchanan County

The Buchanan County Medical Society was host to the Linn County Medical Society, at a meeting held Thursday, November 23, in Independence. R. A. Stewart, M.D., superintendent of the State Hospital there, presented a discussion and clinic on differential diagnosis, classification, and treatment of the more common types of insanity.

Cerro Gordo County

Tuesday, November 21, the Cerro Gordo County Medical Society held its regular monthly meeting in Mason City. After the six-thirty dinner, C. A. Waterbury, M.D., of Waterloo, outlined the methods used in Black Hawk County for taking care of the indigent sick.

William C. Egloff, M.D., Secretary.

Clinton County

Paul Starr, M.D., associate in medicine at Northwestern University, Chicago, addressed members of the Clinton County Medical Society at their regular meeting held in Clinton, Thursday, November 2. Dr. Starr's lecture was on The Treatment of Pernicious Anemia, and he stressed the importance of keeping the blood count slightly above normal, and the hemoglobin percentage high. by the use of different preparations in conjunction with a sufficient quantity of iron. He told us that a blood count should be taken every month, even when the patient apparently felt well, instead of gauging the maintenance dose on the laboratory findings only. The members present received many useful and practical suggestions from the address.

During the business session, the society adopted Standing Orders for the Visiting Nurses, and copies of the same are to be sent to the association as well as to each member of the medical society.

Ralph F. Luse, M.D., Secretary.

Dallas-Guthrie Society Annual Meeting

Officers elected at the Dallas-Guthrie Society annual meeting held in Panora, October 19, are: Dr. George McMahon of Waukee, president; Dr. Howard F. Clark of Stuart, vice president; Dr. Samuel J. Brown of Panora, secretary and treasurer, and Dr. E. L. Bower of Guthrie Center, delegate.

Davis County

Members of the Davis County Medical Society met Friday, November 10, in Dr. H. C. Young's office in Bloomfield. C. C. C. Heady, M.D., presented a paper on The Progress of Medicine in the Last Forty Years, and W. L. Downing, M.D., of Moulton, read a paper on Appendicitis.

Des Moines County

Frank R. Peterson, M.D., of Iowa City, spoke on Gallbladder Diseases, and Paul A. White, M.D., and A. A. Garside, M.D., both of Davenport, discussed Some Unusual Conditions Causing Abdominal Pain, at the meeting of the Des Moines County Medical Society, held in Burlington, Tuesday, November 14.

Fayette County Annual Meeting

Newly elected officers for the Fayette County Medical Society are: Dr. James Parker of Fayette, president; Dr. C. M. Hazard of Arlington, vice president, and Dr. C. C. Hall of Maynard, secretary and treasurer.

Floyd County

The Floyd County Medical Society held its regular monthly meeting in Charles City, Tuesday, October 24. Following a six-thirty dinner at the Garden Cafe, M. L. Floyd, M.D., of the Department of Pediatrics, State University of Iowa, talked on several subjects of interest pertaining to children's diseases.

James B. Miner, Jr., M.D., Secretary

Hardin County Annual Meeting

Dr. L. E. Fraser of Iowa Falls was elected president of the Hardin County Medical Society at its annual meeting, Tuesday, November 21, in Eldora. Other officers are: Dr. F. N. Cole of Iowa Falls, vice president; Dr. W. E. Marsh of Eldora, secretary; Dr. J. A. W. Burgess of Iowa Falls, delegate, and Dr. C. M. Wray of Iowa Falls, alternate delegate.

Johnson County

The Johnson County Medical Society met Wednesday, November 8, at the Oakdale Sanatorium. D. O. N. Lindberg, M.D., Medical Director of the Macon County Tuberculosis Hospital at Decatur, Illinois, addressed the group on Recent Progress in Tuberculosis, emphasizing especially the value of the intra-

cutaneous test and the roentgenologic method in the diagnosis of early pulmonary and mediastinal tuberculosis. Dr. Lindberg's remarks were enthusiastically received. His paper was discussed by Dr. John H. Peck of Des Moines, Dr. J. Carl Painter of Dubuque, Dr. George C. Albright of Iowa City, and Dr. G. Raymond Johnson of Ottumwa.

Horace M. Korns, M.D., Secretary.

Linn County

Members of the Linn County Medical Society were entertained by the Buchanan County Medical Society, Thursday, November 23, in Independence. R. A. Stewart, M.D., superintendent of the State Hospital there, presented a clinic on differential diagnosis, classification, and treatment of the more common types of insanity, which was discussed by Dr. Andrew H. Woods of Iowa City, and Dr. Frank Skinner of Marion.

Louisa County

The regular monthly meeting of the Louisa County Medical Society was held Thursday, November 9, at Oakville. G. D. Jenkins, M.D., and George Dixon, M.D., both of Burlington, presented the program for the evening; Dr. Jenkins spoke on Transurethral Resection of the Enlarged Prostate, Dr. Dixon on The Later Dressing of the Neck of the Femur.

J. H. Chittum, M.D., Secretary.

Pottawattamie County

A joint meeting of the Omaha Douglas County and the Pottawattamie County Medical Societies was held Thursday, December 7, in the Mercy Hospital at Council Bluffs, with the following program: Tumors of the Breast, Herbert H. Davis, M.D., Omaha; Evolution of a Pulmonary Cavity: Its Significance and Management, John Allen, M.D., Omaha; and Endocrine Therapy in Obstetrics and Gynecology, Earl C. Sage, M.D., Omaha.

Arnold L. Jensen, M.D., Secretary.

Scott County Annual Meeting

The annual meeting of the Scott County Medical Society was held in Davenport, Tuesday, November 7. C. F. Dixon, M.D., of the Mayo Clinic, Rochester, was the speaker of the evening, taking as his subject, Surgical Management of Cancer of the Colon. The results of the election are as follows: Dr. Frederick H. Lamb, president; Dr. Martin D. Ott, vice president; Dr. Henry A. Meyers, secretary; Dr. L. A. Block, treasurer; Dr. William Goenne, delegate, and Dr. R. P. Carney, alternate delegate.

Taylor County

John C. Parsons, M.D., and Carl F. Sampson, M.D., both of Creston, were guest speakers for the Taylor County Medical Society, at a meeting held in Bedford, Tuesday, November 14. Dr. Parsons spoke on Sphygmomanometry in Cardiac Disease, and Dr. Sampson read a paper on the Diagnosis and Treatment of Mastoid Infections.

Wapello County Meetings

Tuesday, December 19, H. H. Webb, M.D., of Ottumwa will address the Wapello County Medical Society on The Evaluation of X-Ray Findings in Non-Tubercular Lung Pathology. The paper will be discussed by H. A. Spilman, M.D.

Fred L. Nelson, M.D., of Ottumwa, will read a paper on The Diagnosis of Urologic Conditions, at a meeting to be held Tuesday, January 2, with J. C. Kepler, M.D., opening the discussion.

Woodbury County

A symposium on tuberculosis was presented for the members of the Woodbury County Medical Society, Thursday, November 23, by the following speakers: Robert H. McBride, M.D., Tuberculosis in Children; Howard I. Downs, M.D., Phrenicotomy in Pulmonary Tuberculosis; and Mark C. Wheelock, M.D., reported on the activities of the tuberculosis clinic for the last five years.

Eleventh Councilor District Meeting

An Eleventh Councilor District meeting was held at the Whitney Hotel, in Atlantic, on November 8. A paper on Some Unusual Fractures was presented by Royal A. Becker, M.D., of Atlantic, and discussed by Karl Werndorff, M.D., of Council Bluffs. John P. Cogley, M.D., of Council Bluffs, presented a paper on Some Factors Influencing Surgical Mortality. Charles B. Taylor, M.D., President of the Iowa State Medical Society, discussed Medical Education and outlined this phase of his program for the year. Robert L. Parker, M.D., Secretary of the State Society, gave a short talk on membership and dues. There was an attendance of forty-five at the dinner, with every county in the district represented. It was voted to have a similar meeting at Shenandoah in the spring.

First Councilor District Meeting

Members of the First Councilor District met in Decorah, Thursday, November 2. William A. Middleton, M.D., professor of medicine, University of Wisconsin, spoke on The Treatment of Lobar Pneumonia, and Joseph W. Gale, M.D., associate professor of surgery, University of Wisconsin, addressed the group on The Treatment of Empyema.

Southwest Iowa Postgraduate Medical Society

The Southwest Iowa Postgraduate Medical Society held a meeting in Atlantic, Monday, November 27, in the Cameo room at the Hotel Whitney. Dinner was served at six-thirty, after which Frank A. Ely, M.D., and Tom B. Throckmorton, M.D., both of Des Moines, presented a symposium of case reports and clinical discussion dealing with peripheral nerves, spinal cord and brain disorders. Officers of the organization are Dr. R. L. Barnett, president, and Dr. Thomas F. Thomsen, secretary.

Tri-County Medical Society

More than thirty doctors from Washington, Henry and Jefferson counties met in Fairfield, Thursday,

November 16. Following a six o'clock turkey dinner, a scientific program consisting of two papers was presented; Complications of Appendicitis, A. A. Eggleston, M.D., of Burlington, and Acute Infections of the Urinary Tract, G. D. Jenkins, M.D., also of Burlington. At the business session, Dr. I. N. Crow of Fairfield was elected president of the organization, and Dr. J. W. Laird of Mt. Pleasant was named secretary.

INTERESTING NEWS

In Brief

Iowa, with a negro population of 17,380, has but eight negro physicians.

A study of goiter in Japan shows that only one Japanese in a million has this disease.

A Swiss chemist has recently announced the synthesis of Vitamin C, which he describes as 1-ascorbic acid.

Very recent estimates of deaths due to the World War place military deaths at 13,000,000, and civilian deaths at over 28,000,000.

Experiments with animals have shown that a diet deficient in calcium may cause the optic nerve to degenerate and thus lead to blindness.

Nineteen thirty-three marks the one hundredth anniversary of the first publication of William Beaumont, pioneer observer of gastric digestion.

A threat of sterilization confronts chronic drunkards in Germany with the passage of a new law providing sterilization for "prevention of hereditary incurables."

The Copley medal of the Royal Society of London, given in recognition of original research, has recently been awarded to Dr. Theobald Smith of the Rockefeller Institute.

The Government Lymph Establishment announces the production of smallpox vaccine virus from chicken eggs instead of from calf lymph as has heretofore been employed.

To stimulate scientific research, the University of Wisconsin proposes to relieve 36 full-ranking professors of teaching duties for all or part of the year, permitting them to devote full time to research.

Recent announcement by the Census Bureau indicates that with the admission of Texas to the United States death registration area, death statistics are now for the first time recorded in the whole of the United States.

Ottumwa hospitals and physicians contribute approximately $150,000 in professional services to charity each year, according to a recent statement made by Dr. D. L. Rater, president of the Wapello County Medical Society.

Lectures on social hygiene for eleventh and twelfth grade students, given at Newton, Iowa, and sponsored by the Newton Parent-Teachers Association and the Jasper County Medical Society, were attended by 171 girls and 116 boys.

Hospitals will have the right to liens on personal property of patients, similar to the lien right of hotels if the Iowa Hospital Association is successful in its effort to procure legislation to that effect at the special session now in progress.

PERSONAL MENTION

Dr. Tom B. Throckmorton of Des Moines delivered the main address for the Masonic Thanksgiving Memorial Service, held in Des Moines, Sunday, November 26.

Dr. W. W. Beam of Rolfe and **Dr. G. A. Everson**, formerly of Plover, have formed an association for the practice of medicine in Rolfe.

Dr. B. Raymond Weston of Mason City, gave an interesting address before the local Kiwanis Club, November 11.

Dr. William R. Brock of Sheldon, was the principal speaker at the banquet of the Southwestern Minnesota Medical Society held in Worthington, Tuesday, November 7. His subject was "The Old and the New in Medicine."

Dr. Draper Long announces the opening of his office for the practice of medicine and surgery in Mason City. Dr. Long is a recent graduate of Rush Medical College, and has just completed a postgraduate course in obstetrics at the Chicago Lying-In Dispensary.

Dr. Robert H. McBride of Sioux City spoke before the Parent-Teachers Association of that city, Tuesday, November 7, on "Children and Health."

Dr. Charles T. Bergen has located in Northwood, having purchased the office equipment and practice of Dr. H. A. Hartfiel. Dr. Bergen is a graduate of the University of Minnesota Medical School, and served his interneship in St. Joseph's Mercy Hospital at St. Paul.

Dr. Carl J. Lohmann of Burlington, has left that city for Boston, Massachusetts, where he will start six months of special postgraduate training, after which he will return to Burlington, limiting his practice to surgery.

Dr. Nelle S. Noble of Des Moines delivered a lecture on "The Endocrine Glands," at the noon luncheon of the Woman's Chamber of Commerce, Tuesday, October 24.

Dr. R. D. Bernard of Clarion addressed the Women's Club at Garner, November 9, on the subject, "Diet Fads."

Dr. R. H. Stafford, who has practiced medicine at Sumner for nearly forty-three years, announces the association of Dr. H. F. Turner with him in his practice. Dr. Turner only recently located in Sumner, taking over the practice of Dr. F. J. Bries.

Dr. T. E. Davidson of Mason City spoke before the Harding Parent-Teachers Association of that city, November 9, on "The Effect of Alcohol, Narcotics and Tobacco on the Body."

Dr. W. E. Long of Mason City was elected president of the Kiwanis Club, at the annual election held November 16.

Dr. E. M. Myers of Boone presented a discussion of "Cancer" in a public meeting held at Garner, November 14.

Dr. Ralph E. Keyser of Marshalltown has announced that Dr. M. G. Meyer will be associated with him in the practice of medicine. Dr. Keyser will limit his practice to surgery. Dr. Meyer has just completed a three year interneship at the Henry Ford Hospital in Detroit.

Dr. James B. Miner, Jr., of Charles City was the guest speaker for the West Union Citizens Club, Monday, November 6. His subject was "Sleeping Sickness."

Dr. Maurice H. Noun, formerly of New York City, and a graduate of the St. Louis University School of Medicine, has located in Des Moines for the practice of medicine, opening an office at 816 Equitable Building.

Dr. Ivan T. Schultz of Humboldt, spoke on "Heart Disease," at the November meeting of the Lakeview Commercial Club, held Monday, November 13.

Dr. F. A. Hennessy of Calmar, gave an illustrated lecture on "Cancer," to members and guests of the Lansing Kiwanis Club, Monday, November 6.

Dr. Frederick H. Lamb of Davenport read a paper on "The Fuel of Life," at the regular meeting of the Contemporary Club, Monday, October 23.

Dr. Con R. Harken of Osceola addressed students of the Osceola Junior College, November 11, on "The Challenge of Medical Science to the Future."

Dr. J. L. Doyle, who has been practicing medicine in Keota for the past three and one-half years, has located in Sigourney.

Dr. C. A. Boice of Washington, spoke before the Cedar Falls Rotary Club, October 25, on "Medical Service; Ancient and Modern."

Dr. Roland B. Morrison, son of Dr. and Mrs. O. C. Morrison, has returned to Carroll, where he will be associated with his father in the practice of medicine. The young Dr. Morrison has been taking postgraduate work in the surgical department of the University of Illinois Medical School.

Dr. M. E. Kallman, who for the past three years has been associated with Dr. W. J. McGrath in Elkader, has purchased the equipment and practice of the late Dr. G. F. Kelleher in Postville, and has already moved to his new location.

MARRIAGES

Miss Vera Clark, formerly of Mason City, and Dr. W. W. Southwick of Marshalltown, were united in marriage in Marshalltown, Friday, November 17. After a week's wedding trip Dr. and Mrs. Southwick returned to Marshalltown to make their home, where Dr. Southwick has been practicing medicine for about seven years.

The marriage of Mrs. Leota Montgomery McWee and Dr. Evon Walker, both of Ottumwa, took place Wednesday, September 6, in the First Christian Church of Ottumwa. Dr. Walker is a prominent physician and surgeon of Ottumwa, having practiced in that city for the last ten years.

DEATH NOTICES

Armstrong, Charles Herman, of Preston, aged fifty-three, died November 11, following a long illness. He was graduated in 1907 from Bennett Medical College, Chicago, and at the time of his death was a member of the Jackson County Medical Society.

Rice, Earl, of Ames, aged sixty-six, died October 30, as the result of a heart attack. He was graduated in 1891 from the State University of Iowa College of Medicine, and in 1895 from the University of Illinois College of Medicine. At the time of his death he was a member of the Story County Medical Society.

Stewart, Charles Walker, aged sixty-eight, died November 12, as a result of injuries received in a fall from a ladder. He was graduated in 1891 from Rush Medical College, and at the time of his death was a member of the Washington County Medical Society.

Weston, Burton French, of Mason City, aged sixty-four, died November 18, in a Mason City hospital. Death was due to acute endocarditis. He was graduated in 1891 from Rush Medical College and at the time of his death was a member of the Cerro Gordo County Medical Society.

HISTORY OF MEDICINE IN IOWA

Edited by the Historical Committee

DR. HENRY B. YOUNG, Burlington
DR. TOM. B. THROCKMORTON, Des Moines
DR. FRANK M. FULLER, Keokuk
DR. WALTER L. BIERRING, Des Moines
DR. JOHN T. MCCLINTOCK, Iowa City

Three Generations of Iowa Physicians*

The Doctors Kinnaman

Three generations of medical practitioners in the Kinnaman family is not extraordinary. Jacob Whitmore Kinnaman, who was born in Ellsworth, Trumble County, Ohio, on October 18, 1815, practiced medicine in Ashland, Ohio, for more than thirty years. He was the father of eleven children; nine boys and two girls. Four of the boys were graduated from medical colleges and both the girls married physicians. Two sons of Jacob Whitmore Kinnaman; namely Robert C. Kinnaman and Horace A. Kinnaman, both had only one child who grew to adult life. These sons, after reaching adult life became doctors of medicine.



Horace A. Kinnaman, M.D.
1846-1924

Clarence H. Kinnaman, M.D.
1869-

Joseph H. Kinnaman, M.D.
1900-

Robert C. Kinnaman took over his father's office at his death and continued to practice medicine in the city of Ashland for more than fifty years. His one son, Guy C. Kinnaman was graduated from Rush Medical College, Chicago, located in that city, and died at the age of thirty-two years.

Horace A. Kinnaman was born in Richland County, Ohio, October 17, 1846. In about 1863 he located in Keokuk, Iowa, where as an understudy of his brother, Oliver, he learned to be a telegraph operator. When the Keokuk and Des Moines Railroad was being constructed he was made its chief train dispatcher and train master. In 1868, he married Clara Orr, who was the daughter of William Orr, a physician who practiced medicine in Fairfield and Ottumwa, Iowa. In 1878, Horace A. Kinnaman began to serve his preceptors, A. M. Carpenter, M.D., and J. C. Hughes, M.D., in their offices at Keokuk, Iowa. He was graduated from the College of Physicians and Surgeons, Keokuk, Iowa, in 1882. Two years later he also was graduated from the Jefferson Medical College in Philadelphia. In 1888 he began the active practice of medicine in Keokuk, Iowa. Shortly thereafter he was appointed demonstrator of anatomy in the College of Physicians and Surgeons, Keokuk. When the Keokuk Medi-

* Historical data prepared by Dr. J. H. Kinnaman of Des Moines, Iowa.

cal College was organized he was appointed Professor of Diseases of Children. He was a lecturer on the staff at St. Joseph's Hospital for many years, and continued to practice medicine in Keokuk until the time of his death which occurred December 5, 1924. Horace A. Kinnaman was a member of the Iowa State Medical Society and for several years served as secretary of the local medical society. After the passing of the Keokuk Medical College he served for many years as local surgeon for the C. B. & Q. Railroad.

Horace A. Kinnaman's only son was born on June 30, 1869, in Ottumwa, Iowa. This boy, Clarence Horace Kinnaman, attended the public schools of Keokuk, and was graduated from the Keokuk Medical College in 1899. After having passed the State Board examination he began the practice of medicine in his father's office, continuing there until October 1, 1917, when he was commissioned first lieutenant in the Medical Reserve Corp of the United States army and ordered to report at Camp Funston, Kansas, with the 89th Division. At the beginning of his world war service he was attached to the Division Surgeon's Office as an assistant to the camp sanitary inspector. In February, 1918, he was made commanding officer of Sanitary Squad No. 2, 314th Sanitary Train, 89th Division, and in June, 1918, he was assigned to overseas duty. He was commissioned captain, Medical Corp, May 1, 1919, and returned to this country July 1, 1919. He was honorably discharged on July 29, 1919, at which time he returned to Keokuk, Iowa. On January 1, 1920, he was appointed full time health officer of Geary County, Kansas. This full time county health unit was the first such unit established in the state of Kansas and was a demonstration unit sponsored by the Kansas State Board of Health and the International Health Board of the Rockefeller Foundation. On September 1, 1922, he was appointed Director of County Health Work and Epidemiologist of the Kansas State Board of Health. As director of county health work he assisted the International Health Board of the Rockefeller Foundation in the organization of several full time county health units in Kansas. In 1925 he was relieved of his duties as Director of County Health Work and was made Chief of the Division of Communicable Diseases and Epidemiologist of the Kansas State Board of Health, in which capacity he is serving at the present time. Although Clarence Horace Kinnaman lives in Topeka, Kansas, he is a member of the Lee County and Iowa State Medical Societies and a fellow of the American Public Health Association.

Of the six children of Clarence Horace Kinnaman and his wife, Harriet A. Samuels, a son, Joseph Horace Kinnaman was born on May 6, 1900, in Keokuk, Iowa. Joseph Horace Kinnaman attended the public schools in Keokuk, Iowa, and was graduated from the Keokuk High School in June, 1919. In September, 1919, he entered the State University of Iowa and took the combined course leading to the degrees of bachelor of science and doctor of medicine. He was graduated from the College of Medicine, State University of Iowa in June, 1925, and was appointed full time instructor in the Department of Pharmacology, College of Medicine, State University of Iowa, continuing to serve in that capacity until July, 1927. At that time he was appointed full time health officer of the city of Topeka, Kansas. He resigned from that position in June, 1930, to become Assistant Health Commissioner of the city of Cincinnati, Ohio. In March, 1931, he accepted the position of Deputy State Health Commissioner with the Iowa State Department of Health. In December, 1931, he was appointed Director of the Bureau of Maternity and Child Hygiene, Iowa State Department of Health, and at the present time, he is Director of the Division of Child Health and Health Education of that department. Joseph Horace Kinnaman is a member of Alpha Kappa Kappa medical fraternity, Alpha Omega Alpha, national honorary medical society and Pi Gamma Mu, national honorary social science society. He is a member of the Lee County and Iowa State Medical Societies, a fellow of the American Medical Association and a member of the American Public Health Association. In 1925 Joseph Horace Kinnaman and E. Fern Kirkendall, of Minneapolis, Minnesota, were married. If the fifth generation runs true to form, the next medical doctor in this branch of the Kinnaman family will be E. Corrine, their seven year old daughter.

The History of Medicine in Lucas County

TOM MORFORD THROCKMORTON, A.M., M.D.,
Chariton

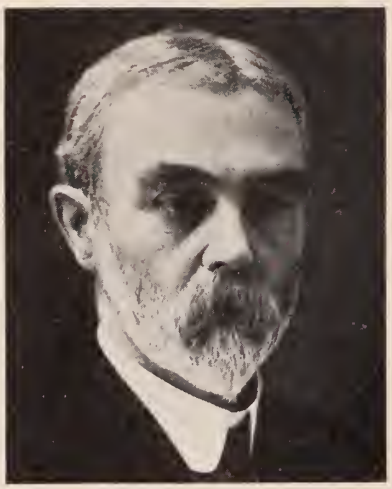
TOM BENTLEY THROCKMORTON, B.Sc., M.D.,
Des Moines

(Continued from last month)

PHYSICIANS WHO HAVE PRACTICED IN RUSSELL

Dr. Charles B. Powell

The first physician to locate in Russell, in the remembrance of the writer, was the late Dr. Charles B. Powell, who was born in Fredricktown, Washington County, Pennsylvania, July 20, 1849. He resided in the villages of Fredricktown and Millsboro, where he attended the city schools, until



Charles B. Powell, M.D.
1849-1930

he was ten years of age. He came with his parents to Moravia, Appanoose County, Iowa, in 1859. Here he grew to manhood. Young Charles spent four years at the normal school in Appanoose County. He then decided to study medicine. Accordingly, he became a student of Dr. J. A. Harvey, of Moravia, and read medicine under his tutelage for three years. He then went to Cincinnati, Ohio, where he spent the winter of 1869 and 1870 as a matriculant in the Eclectic Medical College. After his graduation from this institution, the doctor returned to Iowa, and began the practice of medicine at Iconium, in Appanoose County. However, his stay in the community was short. The thriving little town of Russell attracted his attention, and in 1872 he located there. The following year he moved to Dixon, Soloman County, California, where he remained for one year; but once more Iowa claimed him, for the doctor returned to Russell and again engaged in the practice of medicine. Several years later, he entered the College of Physicians and Surgeons at Keokuk, Iowa, and was graduated from that institution in the class of 1882.

In 1884, the doctor moved from Russell and located in Albia, Monroe County. Here he remained until the time of his death.

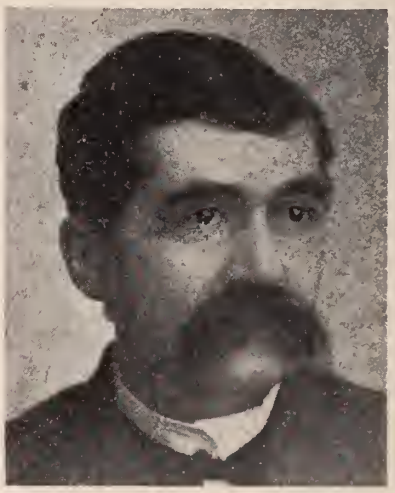
Dr. Powell was married to Miss Sarah Reynolds of Moravia, Iowa, December 18, 1870. Two children were born to this union, Mrs. Jessie Prizer and Dr. Charles Burke Powell. Both children are living and are residents of Albia. Dr. Powell died at his home in Albia, August 14, 1930, and was buried in Oak View cemetery.

Dr. Hatton

A Dr. Hatton located in Russell about 1871, and remained some four or five years. We have no record of his medical education. He is remembered only as "Doc" Hatton by a few of the older inhabitants of the town.

Dr. William Asgil Palmer

Dr. William Asgil Palmer was born in Highland County, Virginia, April 8, 1850. He spent the greater portion of his early school years in attend-



William Asgil Palmer, M.D.
1850-1900

ing Clarksburg Academy. When he was fourteen years of age his parents came to Iowa and located in Monroe County. Here young William went to school for several months. In later years he de-

cided to take up the study of medicine. Accordingly, he became a student in the Bennett Medical College in Chicago, where he attended lectures during the winter of 1872 and 1873. He then came to Russell, where he engaged in the practice of medicine as an undergraduate. During the winter of 1875 and 1876, he took a second course of medical lectures and was graduated from the Bennett Medical College in the class of 1876. Returning to Russell, the doctor succeeded in building up a fine practice and gained the esteem and confidence of the entire community. He made the diseases of children a special study and was very successful in this line of work.

Dr. Palmer was married to Miss Hannah Minerva Powell of Russell, October 12, 1876. She was a sister of Dr. Charles B. Powell. From this union three daughters and one son were born. The doctor was not robust, but he gave himself freely to his work. He died December 20, 1900, at the age of fifty years. The writer and a number of physicians from Chariton were present at his funeral, which was largely attended by country folk and persons in all walks of life. Burial was in the Russell cemetery.

Dr. R. H. Wood

Dr. R. H. Wood located in Russell in the spring of 1878. He was called an allopathic doctor to distinguish him from Drs. Palmer and Powell, who were called eclectic physicians. We have no record of the doctor's medical education. He remained in Russell about four years and was in Steamboat Rock, Hardin County, Iowa, in 1886.

Dr. J. W. Hawk

Dr. J. W. Hawk was a graduate of the College of Physicians and Surgeons, Keokuk, Iowa, in the class of 1882. He was in Russell in 1884. He was secretary of the United States Pension Board at Chariton when Dr. Charles Fitch was its president. We have no record as to when the doctor left Russell or where he located afterward. When last heard from, in 1904, he was living in Denver, Colorado.

Dr. James John Stafford

Dr. James John Stafford was born in England in 1843. He located in Russell in 1893. The record shows the date of his certificate to be September 13, 1886; he was licensed under the practice act on account of eight years practice in Iowa. His certificate was filed in the county, January 4, 1893. We have no further record.

Dr. Charles William Noble

Dr. Charles William Noble was born on a farm in English township, Lucas County, Iowa, September 17, 1861. He was the oldest son of George and Ellen (McKinzie) Noble. His father was born in Scotland; his mother in Canada. His parents came to Iowa in 1860. Charles attended the public and select schools of the county. He was a graduate of the College of Physicians and Surgeons, St. Louis, Missouri, in the class of



Charles William Noble, M.D.
1861-1919

1893, and located in Russell, July 5, 1893. After several years of successful practice he moved to Dallas, Marion County, where he remained until his death.

Dr. Noble was a typical "country doctor". Bad roads, storms, and dark nights did not deter him from answering all calls. He was an honest, conscientious man, always doing his best for his patient. He died at his home in Dallas, September 10, 1919. Funeral services were held in Dallas, with burial in the Chariton cemetery.

Dr. Herbert H. Nelson

Dr. Herbert H. Nelson was a native of Indiana. He was a graduate of Rush Medical College, Chicago, Illinois, February 21, 1888, and came from Confidence, Wayne County, Iowa, to Russell, April 26, 1893. After nine or ten years residenceship in the town he moved away. We have no further record of his whereabouts, except that when last heard from he was located at some place in Missouri.

Dr. William Allison Scott

Dr. William Allison Scott came from Pleasantville, Marion County, Iowa, to Russell, in May 1897. His certificate, granted by the State Board

of Medical Examiners, and bearing the date May 13, 1889, was filed in the county May 12, 1897. We have no further knowledge of the doctor.

Dr. Charles T. Lawrence

Dr. Charles T. Lawrence was a native of Virginia. He came to Iowa via the horse and buggy route from Kansas, and located in the town of Russell, August 12, 1901. His certificate, dated August 5, 1897, shows that he was a graduate of the Eclectic College of Medicine at Cincinnati, Ohio. The doctor was noted for his long white whiskers. He resided in the community for about two years, when he suddenly departed for parts unknown.

Dr. William T. Blakely

Dr. William T. Blakely was located in Russell in the early nineties. He was a graduate of the College of Physicians and Surgeons, Keokuk, Iowa, in the class of 1873, and was located in Montrose, Lee County, Iowa, in 1886, prior to the time he came to Russell. We have no further record of the doctor's activities.

Dr. H. E. Pendleton

Dr. H. E. Pendleton was born in New York in 1843. He received his preliminary education at Norwich Academy, and later studied medicine at Geneva Medical College, New York, from which institution he was graduated in 1867. The doctor practiced two years in Pennsylvania. He came to Iowa from Illinois in 1869, and located in Washington township, Lucas County, on a farm of two hundred and forty acres, about two and one-half miles east of the town of Russell. Dr. Pendleton had a fine, well improved farm, an orchard of five hundred trees, besides forty-six kinds of forest trees and shrubbery. The doctor-farmer took a special pleasure in horticulture and landscape gardening and in the raising of fine stock. He was married to Miss Julia McAboy of Illinois. They had no children, but adopted five.

The doctor had a wonderful growth of beard, the longest the writer has ever seen. When standing, it reached almost to his knees; in this respect resembling "Aaron's beard that went down to the skirts of his garments." The doctor tied his beard up and generally wore it under his vest.

Dr. Pendleton was a correspondent of the Farmers' Journal in 1876, and as such he obtained the premium for the prize essay on swine. The prize was a gang-plow, which the doctor ran with five horses. Dr. Pendleton was easily approached, pleasing in appearance, kind and considerate, and had the confidence and respect of the community. Both he and his good wife passed away many years ago.

Dr. Robert Asa Hills

Dr. Robert Asa Hills, a son of Asa G. and Harriett (Keeney) Hills, was born in South Manchester, Connecticut, March 6, 1882. He came to Iowa in 1884, when his parents located on a farm near Mt. Pleasant, in Henry County. Here young Robert attended the public schools and was graduated from the Mt. Pleasant High School. He then became a student in Iowa Wesleyan College for two years, after which time he spent one year in Lombard College, at Galesburg, Illinois. He received his medical education at the University of Illinois College of Medicine, Chicago, Illinois, and was graduated in the class of 1907. The doctor was located for a while at Donnellson, in Lee County; also at Confidence, in Wayne County. He moved to Russell in 1909.

Dr. Hills was married to Miss Fern Showalter in 1910. From this union two daughters were born, Harriett and Beverly Jean. Mrs. Hills died in November 1919, following an operation for appendicitis. The doctor was married to Mrs. Leta Wright, in March 1924. They are the parents of one daughter, Marjorie May.

Dr. Hills is one of the two physicians practicing medicine in Russell at the present time.

Dr. Charles F. Goltry

Dr. Charles F. Goltry was born on a farm in Cedar township, Lucas County, Iowa, February 19, 1863. He is a son of John and Barbara Jane (McGill) Goltry. Charles worked on his father's farm; and attended country schools. He later taught in the rural districts of Cedar and Washington townships. When he was twenty-two years of age he enrolled in Drake University at Des Moines. From this institution he received his Bachelor of Arts degree in 1889. He was president of the senior class and delivered an address on Commencement Day. Following his graduation from Drake University he accepted the Chair of Ancient Languages in Central Christian College in Missouri. On his return to Iowa he taught Physical Sciences in the Normal College at Humeston, in Wayne County. He later moved to Chariton, where he served as superintendent of the public schools and of the schools in Lucas County, respectively. He retired from active school work in 1902.

He was married to Clara E. Crim, of Chariton, in 1892. Two children came to bless the home; Harriett and Charles. For twenty years he and his good wife were prominently connected with school work in the county. The junior writer of this history well recalls the time he was a pupil in the public schools at Chariton, when Charles Gol-

try was Superintendent of Education. He was a kind man, a good teacher, and merited the confidence of his students.

Leaving the field of pedagogy, he began the study of medicine in Bennett Medical College, Chicago, Illinois, and received his Doctor of Medicine degree from this institution in 1908. Following his graduation, Dr. Goltry located in Westboro, Atchison County, Missouri. Here he practiced medicine until 1922, when he returned to the scenes of his boyhood days and took up his residence in Russell. His first wife died in 1909. The doctor was married to Effie Anderson Rains, of Woodburn, Iowa, in 1925. Dr. Goltry and Dr. Hills are the only physicians now located in Russell.

There are a few other physicians who, at one time or another, have been located in Russell. Information concerning them is extremely meager. Dr. J. E. Goodman was in the town about the year 1879 or 1880. A Dr. Jackson is said to have lived there in the late eighties. He later practiced in Audubon, Audubon County, Iowa, for a number of years. He finally located in Council Bluffs in Pottawattamie County, where he specialized in eye, ear, nose and throat diseases. He died in that city about twenty years ago. Concerning Dr. J. W. Woodman, we have no record as to the time he located in the town or when he moved away. He died in Des Moines about thirty years ago.

(To be continued)

WILLIAM EDWIN CARPENTER, M.D.
1870-1933
Resolution of Appreciation

Whereas, it has pleased the Great Creator to have removed from our presence Dr. W. E. Carpenter, an active and loyal member of the Tama County Medical Society. And whereas, in his passing the Society has lost one of its active and faithful members, one in whom was combined not only the sympathetic and intellectual qualifications that go to make the true physician but also those courageous qualities that are found only in a citizen who has given his best efforts for the welfare of his commuity.

Therefore, be it resolved that the Tama County Medical Society convey to his bereaved family and relatives its deepest sympathy in their bereavement and be it further resolved that a copy be spread on the records of the Society, a copy to Mrs. W. E. Carpenter and published in the State Medical Journal and Tama County papers.

Committee

A. A. Pace, M.D.
J. M. Standefer, M.D.
A. J. Wentzien, M. D.

BURTON FRENCH WESTON, M.D.
1869-1933
Memorial Resolution

Resolved: "The Lord giveth and the Lord taketh away." We bow in silence to Him who called to eternal rest our friend and associate, Dr. B. F. Weston, on November 18, 1933, in Mason City, Iowa.

We recall with gratification his personality which radiated cheer and comfort to all with whom he came in contact. His services both professional and personal will be greatly missed by those whom he served skillfully, loyally and kindly. He was very active in civic and professional life and did much to promote the welfare of the community in which he lived.

Resolved that we express our heartfelt sympathy to Mrs. Weston and to his family, and that these resolutions be entered upon the records of the Society and the Secretary be instructed to send a copy to the family and to the Journal of the Iowa State Medical Society for publication.

Cerro Gordo County Medical Society.

ANNOUNCEMENT OF SCIENTIFIC EXHIBITS

Application blanks are now available for space in the Scientific Exhibit at the Cleveland Session of the American Medical Association, June 11 to 15, 1934. The Committee on Scientific Exhibit requires that all applicants fill out the regular application form and requests that this be done as early as convenient.

The final date for filing applications is February 26, 1934. Any person desiring to receive an application blank, should address a request to the Director, Scientific Exhibit, American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

KIWANIS CLUB MAINTAINS HOSPITAL SERVICE FOR POOR CHILDREN

Establishing a worth-while precedent in practical charity, the Kiwanis Club of Centerville, Iowa, for the past four or five years, has maintained a hospital room in the local municipal hospital where children of the poor can be brought to receive hospital service. The club has enlisted the cooperation of eleven doctors and nurses, who donate their services in cases sponsored by the club. Since January, 1932, eighty-four such cases have been treated in the Kiwanis Club hospital room without charge.

A CLINIC FOR CURABLE MENTAL CASES

A new venture in the segregation of curable and incurable mental cases is being tried in the Boston State Hospital. The records of this institution compiled during the past ten years indicate that forty-five per cent of the patients admitted to the hospital were discharged as arrested or cured within a period of six months. Believing that a more adequate therapy could be administered by segregating those cases in which recovery might be expected, the Boston State Hospital has opened a new psychiatric clinic for this group. The clinic provides special treatment, particularly adapated to the individual case, eliminating the less favorable and less desirable group of incurables from the contact of such patients.

THE JOURNAL BOOK SHELF

BOOKS RECEIVED

ANNUAL REPORT OF THE ROCKEFELLER FOUNDATION FOR 1932, including the reports of the Secretary and Treasurer, the Director of the International Health Division, and the Directors of the Medical Sciences, Natural Sciences, Social Sciences, and Humanities. Printed by the Rockefeller Foundation, 49 West 49th Street, New York City.

INTERNATIONAL CLINICS, Volume IV, Forty-third Series, edited by Louis Hamman, M.D., visiting physician, Johns Hopkins Hospital, Baltimore, Maryland. J. B. Lippincott Company, Philadelphia, Montreal and London, 1933. Price, $3.00.

DR. COLWELL'S DAILY LOG FOR PHYSICIANS, A Brief, Simple, Accurate Financial Record for the Physician's Desk. Colwell Publishing Company, Champaign, Illinois, 1933.

LIFE BEGINS AT FORTY—By Walter B. Pitkin, professor in journalism, Columbia University. McGraw-Hill Book Company, New York and London, 1932. Price, $1.50.

A MANUAL OF DISEASES OF THE NOSE, THROAT AND EAR—By E. B. Gleason, M.D., LL.D., professor of otology, Medico-Chirurgical College Graduate School of Medicine, University of Pennsylvania, Philadelphia. Seventh edition, revised and entirely reset, 651 pages with 261 illustrations. W. B. Saunders Company, Philadelphia and London. Price, $4.50.

MAYO FOUNDATION LECTURES ON THE HISTORY OF MEDICINE—A series of lectures at the Mayo Foundation and at the Universities of Minnesota, Wisconsin, Iowa, Northwestern, and the Des Moines Academy of Medicine. Given between 1926 and 1932. Octavo of 516 pages with 26 illustrations. W. B. Saunders Company, Philadelphia and London, 1933. Price, $5.00.

MEDICAL CLINICS OF NORTH AMERICA, Volume xvii, No. 3, Philadelphia Number, November, 1933. Octavo of 326 pages with 59 illustrations. Per clinic year, July, 1933, to May, 1934. W. B. Saunders Company, Philadelphia and London, 1933. Price, paper, $12.00; cloth, $16.00.

METABOLIC DISEASES AND THEIR TREATMENT—By Dr. Erich Grafe, professor of medicine and director of the clinic of medicine and neurology at the University of Würzburg, Germany. Octavo of 551 pages, illustrated with 37 engravings. Lea & Febiger, Washington Square, Philadelphia, 1933. Price, $6.50.

BOOK REVIEWS

DIET IN SINUS INFECTIONS AND COLDS

By Egon V. Ulmann, M.D., formerly special lecturer for biology at the Oregon State College. Recipes and Menus by Elza Mez. The Macmillan Company, New York, 1933. Price, $2.00.

The author of this volume advances a theory that many patients who suffer from sinus infections and colds are not primarily sick in the upper respiratory system. He believes, on the contrary, that the nasal mucous membrane simply represents a location in which abnormal reactions of the tissues manifest themselves. It appears highly rational, therefore, that in the management of these cases satisfactory results from treatment can only be obtained when proper attention is given to the regulation and management of the diet.

In the first part of the book he furnishes the necessary data upon which to build a concept of diet satisfactory for these patients, emphasizing the effect of starch reduction and the acid base equilibrium. The second part of the book is a practical application of the theories advanced in the forepart. It discusses what to eat, when to eat and how to prepare food. The importance of fruit and vegetable juices and how to prepare them is discussed in detail.

While medical science may not be ready to accept this thesis in its entirety or agree in the frequency of the applicability of the theories advanced by the author, nevertheless every physician has seen in his practice a considerable number of upper respiratory conditions, not of a definitely allergic origin, which have resulted from general systemic conditions, induced or controlled by diet.

The volume is certainly provocative of serious thinking, and the management offered is worthy of trial in suitably selected cases.

DR. COLWELL'S DAILY LOG FOR PHYSICIANS

A brief, simple, accurate financial record for the physician's desk. Colwell Publishing Company, Champaign, Illinois, 1933.

For a number of years, Dr. Colwell's Daily Log For Physicians has been considered a standard office necessity. Each year the book undergoes slight revisions although the body of the book remains unchanged from year to year.

Containing over four hundred pages, the ledger provides a separate page for the transactions of each day of the year with extra spaces for monthly and annual summaries, expense tables, special records, and incidental memoranda. The volume is not to be confused with the small or pocket-size diaries often furnished for physicians' records, since the generously sized page offers sufficient room for the recording of thirty-two patients per day, tabulating the service rendered and the financial account accompanying the transaction. Where fewer patients are seen, the additional space may be readily utilized in recording prescriptions given or essentials of the physical examination. The system is built on a loose leaf plan and durably bound in fabricoid. This is the best and most compact financial record which has come to our attention.

THE DISEASES OF INFANTS AND CHILDREN

By J. P. Crozer Griffith, M.D., Ph.D., Emeritus Professor of Pediatrics in the University of Pennsylvania; and A. Graeme Mitchell, M.D., B. K. Rachford, Professor of Pediatrics, College of Medicine, University of Cincinnati. 1155 pages with 281 illustrations. W. B. Saunders Company, Philadelphia and London, 1933. Price, $10.00.

Although this volume is described as a third edition it is to all intents and purposes a new treatise since the entire text has been rewritten for this printing. The authors wish to retain those encyclopedic qualities which make the book valuable as a reference work for practitioners, and at the same time effect the necessary condensations and rearrange the form so that the book would be suitable for student use as a textbook. The results obtained by this revision have admirably met the avowed purpose of the authors, and the volume will be found highly useful both to the student and to the practitioner.

Following a discussion of the more general subjects underlying the practice of pediatrics the author discusses successively diseases of the newborn, infectious diseases, general nutritional diseases, taking up in the latter half of the book the diseases of infants and children by systems. At the close of each section a comprehensive bibliography is appended, which, together with the carefully prepared index, adds materially to the value of the volume as a reference treatise.

The generous use of well chosen illustrations adds much to the usefulness and interest of the work.

MEDICAL CLINICS OF NORTH AMERICA

Chicago Number, Volume xvii, Number 2. Octavo of 233 pages with 36 illustrations. Per clinic year, July, 1933, to May, 1934. W. B. Saunders Company, Philadelphia and London, 1933. Price, paper, $12.00; cloth, $16.00.

Outstanding in this Chicago number of the Medical Clinics are the discussions of influenza by Dr. James G. Carr and the diagnosis of early poliomyelitis by Dr. Lewis J. Pollock. The timeliness, the thoroughness, and the straightforwardness of these discussions will appeal to every physician.

The section devoted to the clinical pathologic conferences on blood dyscrasias discusses the leukemic state, agranulocytosis, hemophilia, polycythemia and aplastic anemia. In view of the increasing frequency of diseases of the blood forming organs the theme of this symposium is indeed well chosen. Dr. Edward A. Oliver in his discussion of tuberculosis of the skin presents several usual and unusual manifestations of tuberculosis which he accurately describes and illustrates by well chosen photographs.

RECTAL DISEASES IN OFFICE PRACTICE

By Lawrence Goldbacher, M.D., chief of the Department of Proctology, Women's Homeopathic Hospital, Philadelphia. Illustrated with 176 half-tones and line engravings, some in colors. L. Aubrook & Company, 1933. Price, $9.75.

This treatise has been prepared especially for physicians seeing and treating rectal cases who may be unfamiliar with some of the newer practices in the specialty of proctology. The author assumes that a very large percentage of the rectal ailments encountered in general practice are conditions which may be satisfactorily treated in the physician's office. From this viewpoint he offers a very complete and detailed description of the procedures recommended for the relief of these rectal conditions, attempting to cover only those conditions where hospitalization is not required.

His chapter upon the aminobenzoate treatment of pruritus ani is particularly interesting and worthy of trial in severe or intractable cases of this disease. His discussion of the injection treatment for internal hemorrhoids will be of especial interest because of the popularity shown for this method during the past few years.

The numerous, well executed drawings and illustrations, which for the most part have been prepared especially for this text, are commended for their clearness.

REPORT OF THE UNITED STATES GOVERNMENT ON TUBERCULOSIS

With some therapeutic and prophylactic suggestions, by S. Adolphus Knopf, M.D., government delegate to the International Union Against Tuberculosis held at The Hague, September 6-9, 1932. Procurable at the office of The National Tuberculosis Association, 450 Seventh Avenue, New York City. Price, $1.15.

This report by Dr. Knopf embodies his observations as the United States delegate to the Eighth Conference of the International Union Against Tuberculosis, held at The Hague in September, 1932. Following adjournment of the conference Dr. Knopf visited sanatoria for the treatment of tuberculous war veterans in England, France and Germany. His report also deals with the prevention of tuberculosis in children of tuberculous war veterans and civilians.

He takes up first a discussion of the use of gold preparations in the treatment of tuberculosis of the lungs and larynx. The two preparations used for this purpose are sanocrysin and chrysalbin. The status of these agents seems somewhat unsettled although the enthusiasts for their use are greatly outnumbered by those who feel that the drug is without much merit. The advantage of the gold treatment, if there be any, is the short space of time in which cure is effected. Although it is an expensive form of treatment, it is still cheap when contrasted with all the equipment and paraphernalia with which tuberculosis is now treated, and the time consumed in bringing about a cure. A chapter is devoted to the various types of therapy used in handling the recovered case of tuberculosis in an effort to prevent relapses. One of these is "respiratory therapy" or

diaphragmatic breathing. The patient is taught to breathe with his diaphragm so that only the lower portions of the lungs are engaged in the respiratory act, the upper part, where the disease commonly lurks, being stationary or nearly so. The text is enriched with personal communications from authorities endorsing this form of therapy. A final chapter deals with preventive treatment in children of tuberculous parents.

The author is a firm believer in the use of the calmette vaccine and is not at all sympathetic with the idea that this treatment is dangerous in the young. He strengthens his position in this respect by a corroborating opinion from Dr. William H. Park whom he quotes. He is no less insistent on the value of out-door exercise and proper breathing for young persons who have been born in a tuberculous environment. This book can be read with profit by any general practitioner of medicine. F.R.H.

SURGICAL ANATOMY

By Grant Massie, M.D., M.S., F.R.C.S., Assistant Surgeon, Guy's Hospital, London. Second Edition, with 147 illustrations, many in color. Lea & Febiger, Philadelphia, 1933. Price, $6.00.

It is universally conceded that anatomy is a fundamental requisite for the practice of surgery. It is further recognized that many of the facts learned by the student in the dissecting room are forgotten or their significance lost before his advent into the practice of surgery. It is timely, therefore, that a text should be prepared by a competent surgeon, setting forth those practical phases of anatomy which experience has demonstrated as essential to correct surgical procedures.

This volume satisfactorily meets this need. While covering the surgical anatomy of the entire body, citation is made to the section dealing with the stomach as typical of the author's consideration of the surgical problems involved in any given locality. Under this heading he discusses the peritoneal connections of the stomach, its blood vessels, its mucous, muscular, and serous structure, the lymphatic system, and the surgical procedures of gastro-jejunostomy, gastrectomy and pyloroplasty.

The volume is well illustrated with numerous line drawings, many of them in colors.

THE TECHNIC OF LOCAL ANESTHESIA

By Arthur E. Hertzler, M.D., F.A.C.S., Professor of Surgery, University of Kansas. Fifth edition, 148 illustrations. C. V. Mosby Company, St. Louis, 1933. Price, $5.00.

This edition represents a careful revision of former treatises on the subject of local anesthesia by this author.

Two points of difference between the methods advanced by Dr. Hertzler and other authors of works on local anesthesia are (1) the recommendation of minimum amounts of solutions used to produce anesthesia and (2) his advocacy of the infiltrative method over regional blocking. The first named procedure is suggested not primarily because of safety but because a more accurate technic is possible than when the tissues are distended by large amounts of liquid rather haphazardly injected. The second recommendation is made because the infiltrative method secures constriction of the vessels which permits the operator to work in a bloodless field. With the development of spinal anesthesia the field of local anesthesia became somewhat narrowed and as a result has lost some of its usefulness and popularity. Dr. Hertzler's book covers its field thoroughly, and careful description of the choice of a drug, the method of preparation, and its use are described in detail and with precision.

For the operator who uses local anesthesia in his work this book can be of considerable help.

F.R.H.

A TEXT BOOK OF MEDICINE

By 141 American authors. Edited by Russell L. Cecil, M.D., professor of clinical medicine, Cornell University Medical School, and Foster Kennedy, M.D., professor of neurology, Cornell University Medical School. Third edition, revised, 1664 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1933. Price, $9.00.

The rapid growth of medical science during the past few years has rendered obsolete many, if not all, of the older texts on the practice of medicine. This fact, together with the removal of several outstanding pioneers from among the ranks of medical teachers and writers, created a demand for an up-to-date, authoritative, concise, yet complete, textbook on the practice of medicine.

The author of this work met this need in a most satisfactory manner when, some six years ago, he published the first edition of a textbook of medicine. Significant of the popularity of this newcomer in the field of medical texts is the fact that his book has already undergone its third revision, and has been reprinted as many as five times in the several editions. In this third edition radical rewriting has been required in the sections dealing with the virus borne disease group, and in those sections dealing with disorders of the pituitary, suprarenal and parathyroid glands. The entire text has been reset with countless additions and corrections required by changes in our information since the earlier printings.

The work is sufficiently encyclopedic to be highly attractive to the physician or the advanced student, and it is to this group particularly that this excellent text is recommended.

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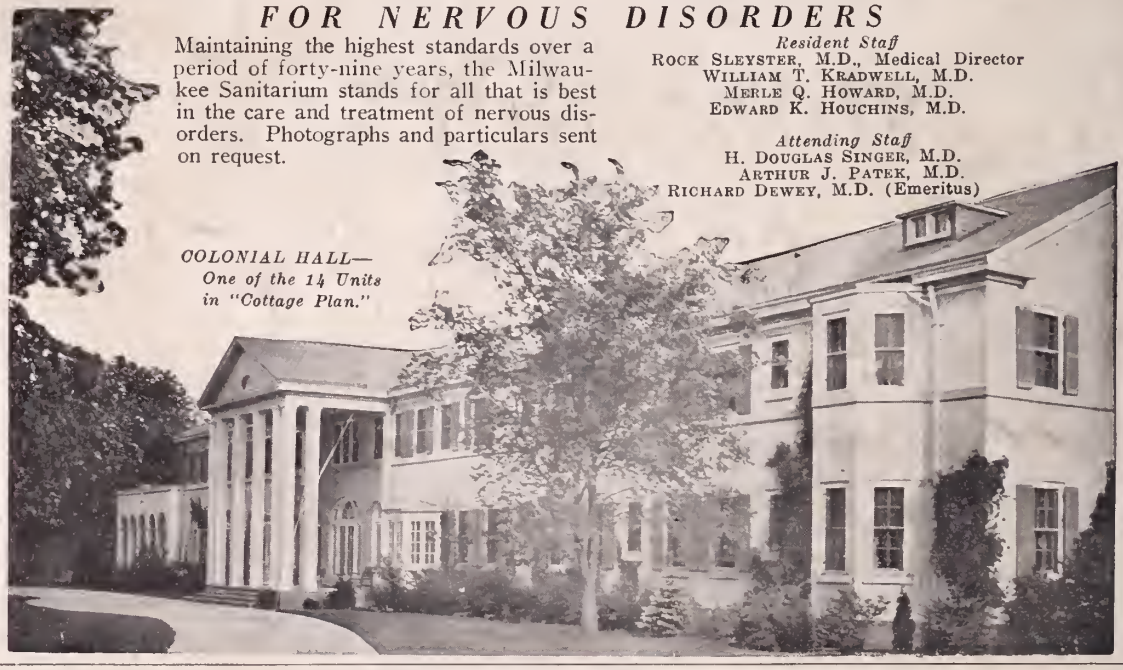
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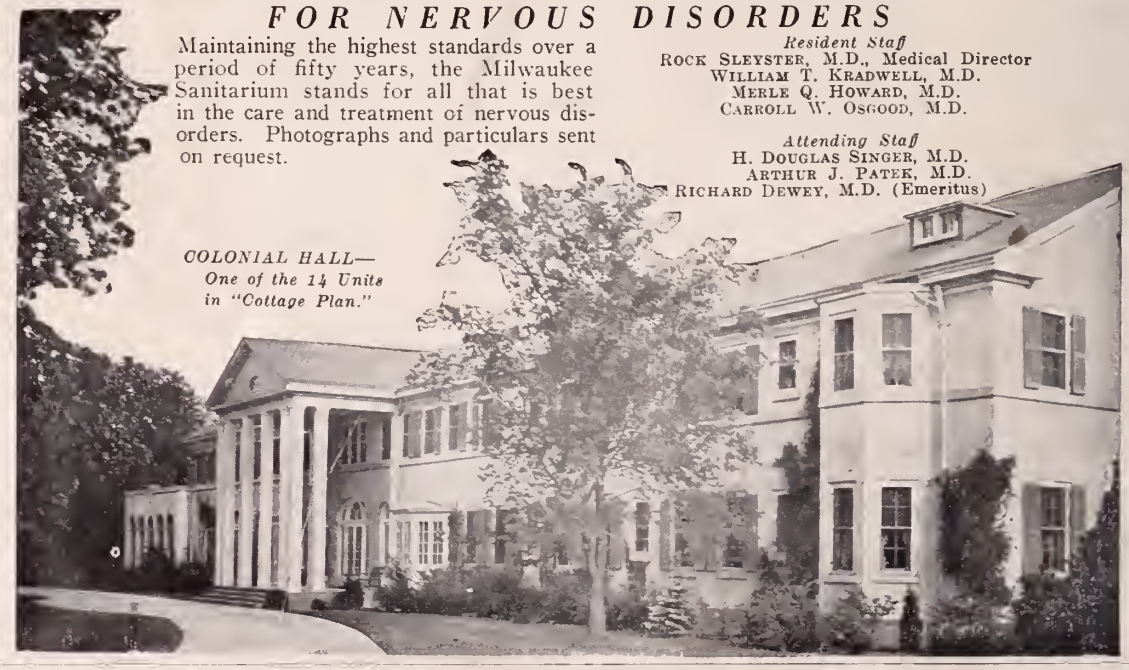
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